



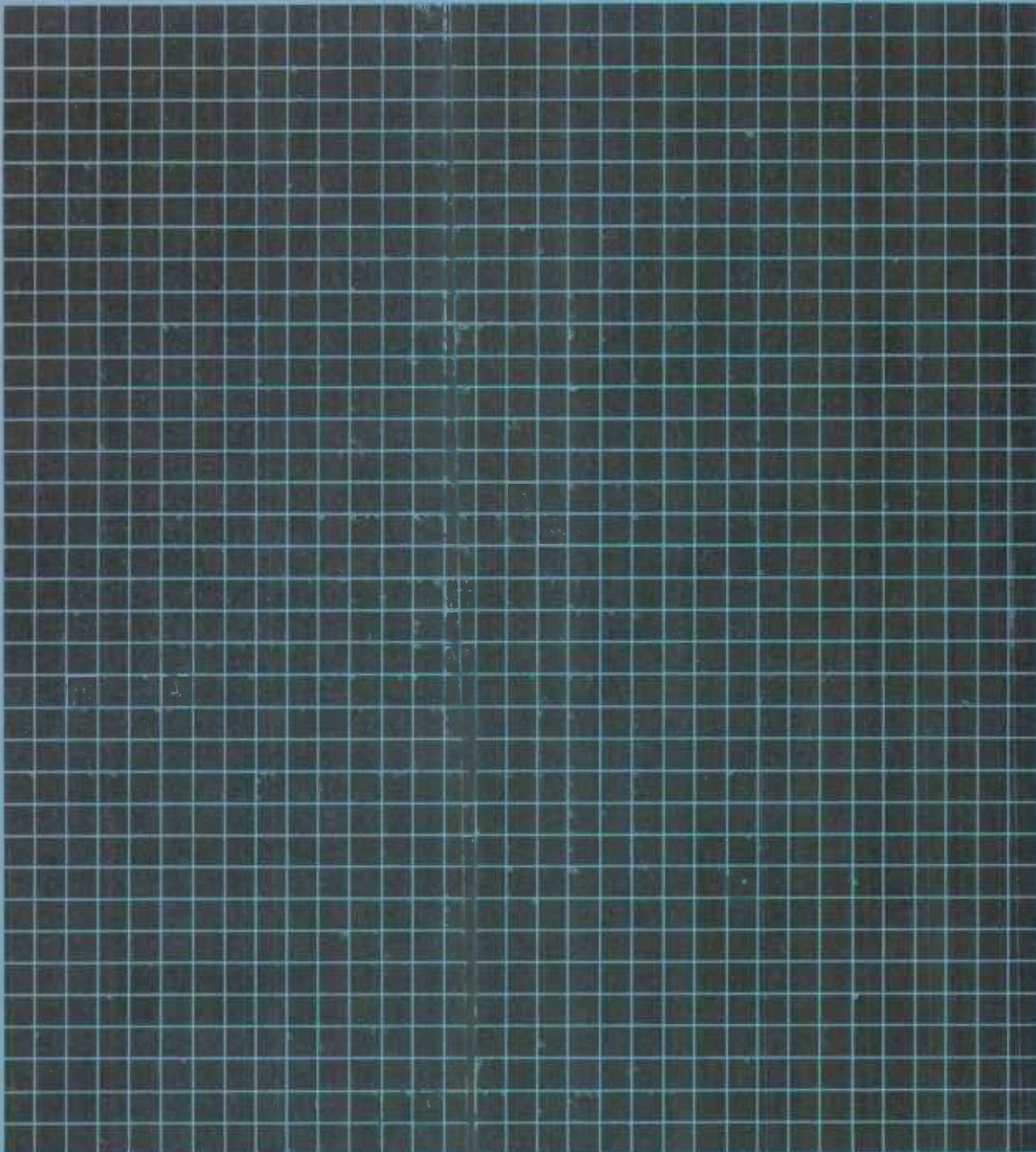
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Dominion Bureau of Statistics

Annual Report

For the Fiscal Year ended March 31, 1968



CATALOGUE No.

11-201



ANNUAL REPORT
OF THE
DOMINION BUREAU OF STATISTICS

FOR THE FISCAL YEAR
ENDED MARCH 31, 1968

March 1969
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The Queen's Printer, Ottawa

THE HONOURABLE JEAN-LUC PEPIN, P.C.,
MINISTER OF INDUSTRY, TRADE AND COMMERCE,
OTTAWA, CANADA.

Sir:

I have the honour to submit the Annual Report of the
Dominion Bureau of Statistics covering the operations and
services rendered during the fiscal year ended March 31, 1968.

Respectfully submitted,

Harold E. Duffett.

Dominion Statistician.

Ottawa, Canada
March 1969.

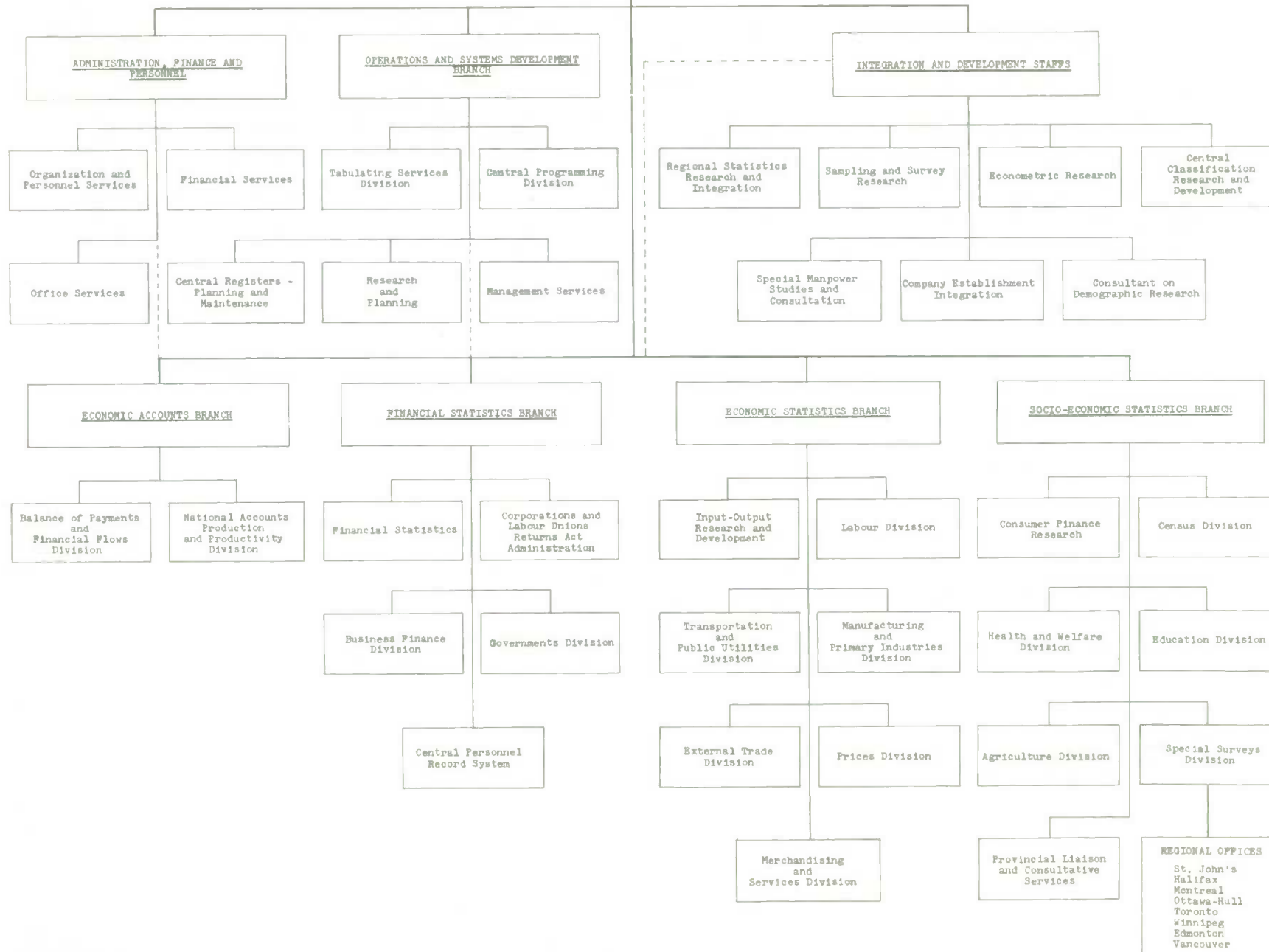
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DOMINION STATISTICIAN

Information and
Year Book Divisions

March 31, 1968



GENERAL ACTIVITIES

The fiscal year under review included the hundredth year of Confederation and brought the Dominion Bureau of Statistics within sight of the fiftieth anniversary of its own foundation, May 24, 1968. Demand for statistical services continued unabated and significant innovations in statistical techniques and planning were introduced or were in prospect at the year end. Canada's Centennial year was marked by the appearance of a handsome volume, *Canada One Hundred 1867-1967*, produced in the Canada Year Book Division, with a printing of 500,000 copies and widespread distribution.

The reorganization of the Dominion Bureau of Statistics which had taken place January 1, 1967 required adjustment of some established procedures and methods of communication but soon settled down and facilitated numerous important developments, such as the re-allocation of positions under a staff freeze which lasted from March 1, 1968 to June 12, 1968. Once the freeze was removed, efforts were resumed to fill vacant positions to full urgent statistical programs. As in previous years, shortages of experienced personnel continued, although some increase was noted in the supply of professional staff at junior levels. In defining more precisely staff requirements for the future, and in accordance with the needs of Treasury Board, program plans are being extended further into future years than has been done up to the present.

Growth of DBS in recent years has necessitated the moving of most of the staff of the Socio-Economic Statistics Branch, including the Census, into two buildings some miles away from the headquarters building. Even a small separation of this nature creates problems of communication, and special efforts have been made to preserve so far as possible the advantages of a centralized and coherent statistical Bureau. Plans are under way for a new DBS building, to be completed in 1971, which will accommodate, in one location, all DBS staff.

The prospects of new technological changes, growth of the Bureau, and the availability of relevant expertise outside of DBS, have all led to greater use of expert consultants, especially in computer matters, and the employment of university staff members to undertake special tasks. Experience has been generally satisfactory and the practice seems likely to grow.

The more urgent, practical and precise needs of users continue to highlight the importance of timeliness and important progress was made in such broad areas as trade statistics and the index of industrial production. The timeliness program will be extended as rapidly as possible.

Preparations for the 1971 Census have included experimentation with self-enumeration and other new features. This experimentation included a major test in London, Ontario in September 1967. In developing geographical coding and other new features, the Sampling and Survey Research Staff has contributed a number of important and novel features. It is expected that the use of new document reader and computer equipment will lead to significant improvements in timeliness and service to users in 1971, which will be of particular interest to groups concerned with regional and small area statistics.

Close collaboration with provincial statistical offices and local users continued. In May 1967, an important Federal-Provincial Conference on Economic Statistics took place and led to the development of a number of active, specialized, continuing committees on legislative and statistical topics. The development of small area intercensal statistics continued in DBS, with initial emphasis on population, employment and income.

One of the few large new surveys undertaken in recent years was initiated in March 1967 with the signing of a large contract (itself an innovation) with the Department of Manpower and Immigration for a new continuing survey on job vacancies. This new survey, developed from the beginning, offers an opportunity to utilize the most modern technology and involved co-operation of a considerable variety of specialized skills from within DBS.

Among staff changes during the year was the loss through retirement of Dr. C. C. Lingard, Director and Editor of the Canada Year Book and Mr. F. J. Rashley, Director of the Merchandising and Services Division. Their counsel and contribution to the efficient operation of the Bureau were greatly appreciated. At the same time DBS welcomed the appointment of two new Directors-- Mr. Pierre Joncas, the new Director and Editor of the Canada Year Book and Mr. Gerald Snyder as Director of the Merchandising and Services Division.

The year was featured by growing pressures on DBS, and especially on experienced DBS personnel, arising not only from statistical programs but also from requirements related to new government-wide developments such as the redefinition and reclassification of staff positions, the beginning of the program budgeting system and the diversion of increasing numbers of staff to language courses. The maintenance and growth of a quality statistical program in such circumstances has been possible only through the dedicated and willing efforts of the DBS staff at all levels.

CANADA YEAR BOOK DIVISION

The program of the Division includes the planning, compiling, editing and publication annually of the English and French language editions of two basic reference reports, the *Canada Year Book* and the handbook *Canada*, the revision of material relative to Canada for a score of national and international yearbooks, and the maintenance of a suitably stocked library with appropriate services for statistical research and study.

The compiling, editing and printing of the *Canada Year Book 1968* extended throughout the fiscal year and it was anticipated that the English edition would be completed about June 30, 1968 and the French edition two months later.

During the fiscal year 500,000 copies of *Canada One Hundred 1867-1967* (*Canada un Siècle 1867-1967*), the Division's special issue of the handbook *Canada*, designed to commemorate the centennial of Canadian Confederation, were sold--establishing a Canadian record for book publication. A Spanish edition of *Canada One Hundred 1867-1967* was prepared for publication and was in the hands of the printer at the close of the fiscal year. The official handbook *Canada 1968* is expected to be released in both official languages by October 1968.

The Division assumed responsibility for publication of the 1961 Census Monographs--receiving manuscripts from the authors, planning the format of the series of volumes, the design and page layout of text, tables and charts and the selection of type faces. During the year the following volumes were edited, proof-read and processed:

1. Labour Force Studies:

- (1) *Historical Estimates of the Canadian Labour Force* by F. Denton and S. Ostry (in English and French);
- (2) *The Occupational Composition of the Canadian Labour Force* by S. Ostry (in English with French under way);
- (3) *Provincial Differences in Labour Force Participation* by S. Ostry (in English with French under way);
- (4) *Unemployment in Canada* by S. Ostry (in English with French under way);
- (5) *The Female Worker in Canada* by S. Ostry (under way in both English and French);

2. *Tendances et Facteurs de la Fécondité au Canada* by Jacques Henripin (in French with English under way);

3. *Urban Development in Canada* by L. O. Stone (English);

4. *Trends in Canadian Marketing* by M. S. Moyer and G. Snyder (English);

5. *Incomes of Canadians* by J. R. Podoluk (English under way).

The Information Division prepared cover designs for each volume and undertook promotion of sales and distribution in co-operation with the Queen's Printer.

Focussed around the *Canada Year Book* coverage of authoritative Canadian data, the Division supplied regular series of statistics for the United Nations Statistical Monthly Bulletins, the United Nations Statistical Yearbook and the International Labour Office, and in addition provided up-to-date revisions of Canadian statistical and textual material for many standard national and international reference works as well as dispensing current and historical data in response to multi-subject inquiries received by the Bureau.

The Library of the Dominion Bureau of Statistics maintains a large stock of books, periodicals, documents and reports for the use of the DBS staff, research workers and the general public. It also has an extensive collection of statistical publications received on an exchange basis from many countries.

Because of the substantial increase in professional staff in the Bureau during the past few years, the demands have taxed the services of the Library staff which has not increased in the same ratio. Priority has been given to acquisition of materials to meet this demand and two persons devote their time solely to purchase and other acquisitions of material. To indicate the increased volume of purchases, \$26,000 was spent for the fiscal year under review, compared with \$22,000 and \$15,000 for the two previous fiscal years.

Heavy demand was made on the Library, also, by officials of other government departments, academic staff and students of universities, as shown by an increasing number of users of the Library and inter-library loan requests. The Library also borrowed on inter-library loan a large number of publications from other libraries for the use of Bureau staff. The Library has been actively assisting the Inquiries Section of the Information Division in handling requests from the public by providing information from library resources and obtaining material for inclusion in a non-DBS publications reference collection for the Division.

The Historical Catalogue of DBS Publications, 1918-1960 was published in March 1968.

In co-operation with the National Library and Public Archives, it is now planned to make available in microprint form, out-of-print publications listed in this catalogue.

Because of staff restrictions being applied generally in the public service, the Library has not made the expected progress in

development of new services and application of mechanized systems which was mentioned in the previous annual report. However, with approval of the purchase of a microfiche reader-printer and other equipment for the 1968-69 fiscal year, it is hoped to make a start in the development of some of these services in this period.

INFORMATION DIVISION

Further advances were made during the year by each of the four operating sections of the Division:- Publicity, Statistics Use Development, Inquiries and Publications Service. Activities sought to extend and develop the use of the Bureau's statistical product and by widening the understanding of it, to improve public co-operation in the collection of the information on which statistics are based.

A study was undertaken on the work involved in converting to bilingual format those publications which are now produced in English only, in order to facilitate the conversion program. This task is being examined by the Translation Bureau and it is hoped to make some progress in this regard depending on resources available.

Further improvements were made in the design and typography of DBS publications. The first statistical series to profit from new designs was the 1966 Census publications. A series of monographs based on 1961 Census material also evidenced a fresh graphic presentation as did a number of publicity and promotional pamphlets and folders.

A new publication, the *Statistical Observer*, was introduced to serve as a medium for broadening the exchange of information on statistics and statistical research among professionals in all levels of government, in universities, in business and in other public and private organizations.

The Inquiries Section of the Division was expanded to provide improved services for an increasing number of inquiries being received by the Bureau especially from the business community. This Section during the year handled an average of approximately 900 inquiries by telephone each month and 600 by mail. In addition, there was an average of 70 visitors per month who visited the section seeking statistical information. Some of the more complex questions required a good deal of time and special tabulations. Information was assembled from a variety of sources, mostly

within, but sometimes without DBS. The majority of inquiries came from Canadian sources but a number of others were received from foreign countries. The Section also was engaged in revision and updating of the *DBS Catalogue of Publications*.

The Statistics Use Development Section began a detailed analysis of inquiries received by all Divisions of the Bureau over a 3-month period as one assessment of the nature and source of the broad demands for statistics across the country. Special studies were also done on the uses being made and the strengths and weaknesses of the *DBS Daily Bulletin*, preparatory to improvements in format and content where possible. The first regional statistics use development officer for the section was appointed during the year for Montreal. A number of seminars have been held with industry groups and associations devoted to the uses of DBS information in business and have been well received. In addition, this appointment has resulted in an increase in visits to the office of business people interested in the use of DBS information.

An advertising program designed to introduce the use of statistical information to non-users in business in all regions of Canada received a heavy response. Handling of the return coupons which were included in the advertisements put a further load on the Inquiries Section. A total of 4,600 coupons were received and each was sent an individual reply. This project resulted in a wide dissemination of statistical reports to many who had not previously availed themselves of DBS information on their particular business sector.

Publicity activities included display units for business and professional association conventions. A number of pamphlets were produced during the year for Agriculture; the Labour Force Survey; Job Vacancy Survey; the Family Expenditure Survey and Census Monographs. Several news releases were sent out during the year, and on a number of occasions,

information on DBS operation was assembled for media representatives resulting in further circulation of the Bureau's activities and services offered to the general public. Information Division personnel assisted in preparation and arrangements for a variety of speeches given by DBS staff members.

Special publicity projects were undertaken in association with subject divisions aimed at improving the rate of response to DBS questionnaires. With the same end in view, paid advertising was developed for insertion in specialized business publications.

In September 1967, in the city of London, Ontario, the first Canadian test census-by-mail was conducted and a full publicity program was developed to obtain

public co-operation. Newspapers, radio and television coverage was extensive, and results of the census test were encouraging. The campaign included direct mail pieces, participation in many radio and television presentations, posters, speeches and newspaper articles and some paid advertising.

The *DBS Daily and Weekly Bulletins*, which summarize the Bureau's statistical output, continued publication during the year in both French and English. Circulation of the *DBS Daily* at the year end was 1,750 and, of *Quotidien du BFS* 350. As the result of promotional work, circulation of the *Weekly Bulletin* increased from 2,700 to 4,900 for the English and from 350 to 1,100 for the French edition.

INTEGRATION AND DEVELOPMENT STAFFS

The following professional staffs are attached to the office of the Assistant Dominion Statistician for Integration and Development: Central Classifications (Research and Development); Sampling and Survey Research; Econometric Research; Regional Statistics, Research and Development; Company-Establishment Integration; Special Manpower Studies and Consultation; Consultant on Demographic Research. A review of the activities of these staffs during the fiscal year follows:

Central Classifications, Research and Development

The project to develop a Canadian Classification and Dictionary of Occupations (CCDO) in co-operation with the Department of Manpower and Immigration continued during the year. DBS staff spent some months working as occupational analysts with staff of the Manpower and Immigration Department to become familiar with all aspects of the project. This included work in the field doing job analyses, work at headquarters on occupational analysis and time spent on development of the classification structure.

A convertibility table has been prepared linking the American Dictionary of Occupational Titles, Third Edition, (DOT III), with the 1961 Census of Canada Occupational Classification Manual. The convertibility table was required by the Immigration Branch following a decision to use the DOT III in coding immigrants by occupation. Statistics of immigrants by occupation are published on the basis of the

Census occupational classification to facilitate comparisons with population figures including census data on immigrants. The CCDO project will result in a standard occupational classification which is designed as a multi-purpose system to replace the various (and often conflicting) occupational classification schemes now being used.

Various sources of occupational terms not included in the 1961 Occupational Classification Manual are now being investigated, including current statistical surveys such as the Labour Force Survey and unemployment insurance records, as well as returns to the Job Vacancy Survey, the file of collective agreements maintained by the Department of Labour and records obtained from current census tests. A sample of one thousand 1961 Census enumeration areas has been selected to permit study of the occupational terms actually reported as an aid in determining the content of the index to the 1971 Occupational Classification Manual.

Many requests have been received during the year for a final edition of the Standard Geographical Classification Manual. Preparation of the final edition of the manual has been delayed until analysis of the 1966 Census experience provided a revised list of settlements and a coding check. In the meantime, computer programs have been written to allow rapid reproduction from computer "print-outs" of the manual or any special arrangement of geographical units required for a particular purpose. The basic file of names, with codes, has been brought up-to-date and the descrip-

tions of settlements revised. A special manual was prepared for use in the London Test Census and various special lists have been provided to users for their particular needs.

In the field of commodity classification, considerable work was done during the year to develop a version of the Standard Commodity Classification suitable for coding and tabulating statistics on materials used and products shipped by Canadian manufacturers. This project is continuing in co-operation with the Manufacturing and Primary Industries Division and the External Trade Division. The special requirements of those compiling input-output tables for commodity groups reflecting the principal products of industries have also been taken into account. Many enquiries on the commodity classification have been received during the year.

Sampling and Survey Research

The prime responsibility of the staff is to work on the methodology of DBS surveys, design new surveys or redesign existing ones, and advise and participate in their implementation. The objective of such work is to achieve through the application of sampling, improved survey methods or automation, one or more of the following: increase the reliability of statistics; improve their timeliness; and/or reduce the cost of compiling them. Most of the work of the staff can, therefore, be grouped around the activities of the different subject-matter divisions.

Census Division. - Reference was made in last year's annual report to three projects undertaken to measure the coverage errors of the 1966 Population Census, and the coverage and content errors of the 1966 Agriculture Census. An initial report was produced on the errors of the Agriculture Census and will shortly be published by the Census Division. All other reports on these projects will be completed during 1968.

A large part of the staff's effort was oriented towards the planning of the methodology of the 1971 Census and several projects were undertaken in this connection.

The staff participated in the general and detailed planning of a Census Test undertaken in London, Ontario. The objective was to test a new method of data collection in urban areas which holds out the promise of important improvements in the reliability of census data without significantly changing the cost of data collection. The test was successful, but before a decision can be made as to whether these methods will be used in 1971, two other tests will be carried out in

1968. In addition, other tests will be carried out in selected rural areas to test alternative methods of data collection in non-urban areas which retain most of the advantages of the method tried out in London. The census tests are used as occasions for the development, testing and refinement of quality control methods to be applied to a large proportion of the temporary field staff of the Census.

In connection with the London Test Census, the staff had a special responsibility to design and carry out a survey to evaluate the coverage errors associated with the census data collected during the test. The results of this study which will be available in 1968 will plan an important role in assessing the new methodology used in London.

The staff was responsible for developing, in consultation with the Census Division's subject-matter statisticians, specifications for a computer program to edit and correct the raw data obtained in the London Census Test. It is hoped that the use of a program like this in connection with the 1971 Census will make a substantial contribution towards the improvement of the timeliness of census data by minimizing the need for manual correction of census records. A project was designed to evaluate the effectiveness of the automatic edit and correction program.

A study was originated to investigate the possibility of extending sampling within the Census--i.e. of collecting more of the Census questions from a sample of the population than in 1961. The extension of sampling would introduce errors into the census data, but at the same time it would reduce cost and improve timeliness. The extent of sampling depends on the balance of a number of factors: the magnitude of sampling errors in comparison with response and other errors; the extent of the possible improvement in timeliness; the extent of the likely cost-reduction; and the extent of detail required in the final tabulations. A preliminary report was written and the study is continuing in collaboration with the professional staff of the Census Division and others.

Special Surveys Division. - Methods were developed to offset the influence of uneven urban growth on the reliability of Labour Force Survey sample estimates. A system of partial revision of the sample in urban areas has been proposed and it is now in the process of being implemented by the Division.

Monthly tables are produced to show the sampling variability of over 40 Labour Force Survey estimates. A monthly set of tables and write-up is now produced jointly with the professionals of the Special Surveys Division

on the cost of the survey, on non-response rates, and on other response errors. These are evaluated monthly to ensure that the quality of statistics and the cost of their production remain in close-to-optimum balance.

Labour Division. - Preliminary investigations into the design of editing and imputation for survey returns in the Employment and Payrolls Survey--Large Firms (ES 1) have been carried out during the year in preparation for the design of a new system for the ES 1. This design was begun during 1968-69 and is scheduled for implementation early in 1969-70. The design for the new system will utilize the experience gained in the development of the Employment and Payrolls Survey--Small Firms--System (ES 2), the Current Shipments Inventories and Orders System (CS 10) and an earlier version of the ES 1. For example, while the system as a whole will be very large and complex, we have learned to break it down into modules each of which is relatively simple and can be developed, programmed and implemented separately.

Work continued on the Employment and Payrolls Survey--Small Firms (ES 2) during 1967-68 and testing and debugging has almost been completed. There is every reason to expect that the new system will be in full operation by June 1968 and that it will then be possible to drop the old system.

A small section staffed by two professional statisticians and a technical officer was set up to fulfill our responsibility for the design and development of technical aspects of the Job Vacancy Survey, scheduled for introduction as a regular semi-monthly survey early in 1969. This is an unusually complex survey of a type for which there are few, if any, precedents. Furthermore, the nature of the information it will provide and the uses which that information will serve call for very rapid processing of the survey returns. The objective of rapid processing in turn calls for flexible, efficient, generalized computer systems for file creation and maintenance, processing of a variety of survey returns, and automated preparation for distribution of a large variety of information. A survey design calling for the joint use of mail and area sampling methods has been prepared and is in the process of testing and refinement prior to large-scale implementation. Specifications for a number of computer systems have been written and are in the process of analysis, programming, or testing.

Work continued on the development of an annual Labour Costs Survey being carried out by the Labour Division. The original design was prepared in 1966-67 but has required extensive modification during 1967-68 in the

light of changing conditions particularly with respect to the source file for sampling purposes. In addition, specifications for tabulation have been prepared.

Industry Division. - Throughout 1967-68, work has proceeded on the full development of a design prepared in the previous year for the selection of a suitable sample and subsequent estimation for the Current Shipments, Inventories and Orders Survey. The staff has been testing the design in a small segment of the survey population by manually simulating the complex system to be taken over eventually by the computer. The system has been found to work well and will be introduced on a fully computerized basis during 1968-69.

Transportation and Public Utilities Division. - The staff continued to provide assistance to this Division, notably in the preparation of specifications for computer sampling from provincial vehicle registration tape files and in overcoming mailing and procedural difficulties in handling the Motor Transport Traffic Survey.

Merchandising and Services Division. - Mention was made in last year's annual report of research work oriented towards the development of a new design of the Retail Trade Survey. The present design of the survey is not based on a probability sample and there are some special difficulties in estimating the impact of new stores coming into existence and existing stores going out of business. A new design was developed in broad outlines combining most of the advantages of area and list sampling. The new design was implemented, in co-operation with the Merchandising and Services Division, on a pilot basis in Prince Edward Island. The pilot survey will be evaluated during 1968-69 and the final details of the survey design will be developed.

While work continued on the development of a new design for the Retail Trade Survey, the current version of the estimation procedure has been automated in order to improve the timeliness of the data by facilitating the preparation of preliminary estimates and in order to save some staff.

Some maintenance work was carried out in connection with the Wholesale Trade Survey developed during the previous fiscal year.

External Trade Division. - An experiment was designed (and the staff participated in its implementation) to evaluate the feasibility of having the coding clerks of the External Trade Division code on a form and in a way

which would render the coding forms readable by document readers. If this could be done, then the need for the present substantial amount of keypunching would be obviated. The experiment will be evaluated during 1968-69 by matching the results obtained through keypunching and through the document reader and analyzing the discrepancies.

A sample design was established to replace the present practice of coding and processing every import document by sampling those documents with total values of less than \$1500. The sampling, when implemented, is expected to reduce the workload of the Division considerably, thereby enabling it to further improve the timeliness of its publication and save some staff. The sampling is expected to be implemented during 1968-69.

Maintenance work was carried out in connection with the Survey of Tourist Expenditures designed during the previous year.

Special Projects. - Reference was made in last year's annual report to a new project whose objective is to use the computer to assign geographic latitude and longitude coordinates to statistical records containing a postal address as most statistical records, in particular Census records, are of this kind. Once the records are so coded, statistical tabulations can be retrieved relating to any area for which information is required by our users (subject to restrictions of statistical confidentiality). Developmental work continued on the project by a project team composed of members of the Sampling and Survey Research Staff, Census Division and Central Programming Division. A major project report was published outlining the system conceptually, stating the system design objectives and documenting the completed detailed implementation work. The system is described in 3 parts: Part 1 is the development of the street master files which will enable us to geocode urban addresses. It is anticipated that by means of this system, capability about 15 to 25 street master files for the largest urban areas will be produced, covering about 50% of the enumerated population. Part 2 is the development of the capability to recognize machine readable addresses in non-standard forms, the geocoding of addresses and the storage of census data in a form which permits fast and inexpensive tabulations subsequently. Part 3 is the development of fast, inexpensive, flexible retrieval and tabulation techniques to satisfy users' requests by arbitrarily specified areas and by any combination of census characteristics.

Part 1 of the system design and development is completed and was demonstrated by having produced a street master file and by

having plotted a street map for London, Ontario. The decoding, verification and error correction of addresses in non-standard form has been demonstrated within the framework of a limited test. Considerable effort has been expended to determine the potential users' requirements in relation to geographically referenced tabulations. The system development has been periodically reviewed and frequent dialogues have taken place with a large number of municipalities, provincial governments and universities. It is believed that the system design outlined to date meets the approval of these potential users.

The Survey Methods Staff has continued to provide technical advice to the Canadian Government Travel Bureau and to monitor surveys carried out for that Bureau by private agencies. In addition, it has participated in the development of plans for a large national travel survey tentatively scheduled for 1970, and has participated in meetings of the National Travel Research Planning Committee.

A sample survey of American motorists in Canada was carried out by private agency under contract to DBS and the Canadian Government Travel Bureau, jointly, during the period July 1 to September 21, 1967. The design for the survey and the monitoring of the implementation of that design and subsequent data processing was the responsibility of the Survey Methods Staff. The survey was completed satisfactorily and the results, the regular DBS travel data, and a comparative analysis will form the basis for recommendations for future collection of statistics in this area.

Consulting services were provided on a large number of smaller problems and projects involving most of the divisions of the Bureau as well as several other federal and provincial government departments. A paper was published in the Journal of the American Statistical Association on the new design of the Canadian Labour Force Survey. Two papers were presented to the annual meeting of the American Statistical Association on work in connection with census methods and on the geocoding project. Papers were also presented at the Oxford Symposium on Record Linkage; at the International Statistical Institute meeting in Sydney, Australia, and at the meeting of the Information Processing Association in Jerusalem, Israel.

Econometric Research

The Econometric Research Staff carries out a wide variety of research and development projects and provides a consulting service to other divisions of DBS in connection with problems involving econometric analysis or methodology.

Members of the Econometric Research Staff participated actively in the program to improve the timeliness of DBS statistics. In particular, exploratory studies were carried out in the areas of employment statistics, industrial production statistics, and the national accounts with a view to developing methods of producing advance estimates of monthly or quarterly series for earlier publication. These studies were undertaken in co-operation with members of the divisions in which the series are produced and others involved in the DBS timeliness improvement program.

As in previous years, emphasis was placed on the use of computer techniques to improve timeliness and efficiency. A consulting service was maintained to encourage and facilitate the use of general purpose computer programs throughout DBS. In co-operation with the Staff Development and Training Section, courses of instruction on the use of one widely applicable program were provided to a large number of DBS personnel during the year.

Work was carried out in co-operation with the Business Finance Division to provide estimates of capital stock in manufacturing industries for the period 1961-1967. Further work was initiated to assess the usefulness and reliability of the capital stock and related investment series for purposes of economic and econometric analysis.

Research assistance was provided to the Special Manpower Studies and Consultation Staff in connection with an intensive econometric analysis of factors influencing the participation of women in the labour force.

The Director of the Staff acted as co-ordinator of demographic and related projection work in DBS and the Staff provided consulting services to the Census Division in connection with the use of computer programs in making population projections. Consulting work was also carried out for a number of other divisions during the year.

Regional Statistics, Research and Integration

In response to demand by various federal and provincial departments and agencies, work has been proceeding on a developmental program which is to expand the supply of the most needed socio-economic data for small areas.

The purpose of one of these projects is to develop the methodology and procedures, including all-inclusive computer programs for producing a comprehensive and consistent set of annual population estimates for counties and census divisions. Experimental estimates

by alternate methods have been produced for 1961 and 1966 and compared with respective census results. Where necessary, adjustments in the methodology are being made to apply to 1967 data so that estimates of population for 1967 can be produced during 1968. The statistical work has been carried out in consultation with the Census Division and the Consultant on Demographic Research.

Work is also underway to produce annual estimates of money incomes for counties and census divisions. The aggregates produced initially will not agree with the official national accounts totals and a decision will have to be made as to whether arbitrary reconciliation should be made. The project is carried out under the direction of the Co-ordinator of Consumer Finance Research with assistance from the Regional Statistics Staff.

Research has been completed on developing measures of manufacturing employment growth for counties and census divisions using a specially prepared computer program. Two periods were compared for measuring changes in manufacturing employment: 1949-1959 and 1961-1965. A reference paper is under preparation on this project.

The staff has provided research assistance and consultation to DBS divisions and other government agencies on various boundary problems such as the revision of the Saskatchewan census division boundaries, the delineation of metropolitan areas and special administrative regions. The staff has also been involved in the work of various inter- and intra-departmental committees and working groups. The objective of these involvements was to promote and provide advice on the development of small-area statistical information by such means as utilizing administrative records for statistical purposes and extending the codeability of various record systems.

Company Establishment Integration

This staff was established near the end of 1966. One of its purposes is to examine the extent to which the annual income tax statements of business firms may be integrated with and used to replace, reduce or supplement Bureau surveys of all business and industry sectors of the Canadian economy.

A very high proportion of the basic annual data now collected in Bureau surveys of business and industry is also reported in the financial statements attached to their tax returns. However, using one to replace the other or integrating one with the other for such a massive volume of data is a highly complex and time consuming task. Nevertheless,

in spite of these difficulties, there may be possibilities of producing better data with less work on the part of the respondent and the DBS. Examining the feasibility of the use of taxation data for such purposes has been made possible by enactment of the Corporations and Labour Unions Returns Act. Under the terms of this Act, income tax returns of business and industry are available to the Bureau for extracting statistical information in the same fashion and for the same purposes as in the case of other DBS surveys conducted under the Statistics Act.

The ultimate objective of the work underway is the development of a reporting system which will ensure that respondents relate or integrate in a consistent fashion, at the reporting stage, statistics which apply to different levels of the same organization - the establishment, the company or the enterprise. In the work being done, account must be taken of the fact that financial statements filed with the tax return apply to legal entities, usually an incorporated company which may consist of an aggregation of data for a number of establishments or plants which form parts of the legal entity. On the other hand, most Bureau surveys of business and industry are at the establishment or plant level for the purpose of providing a more detailed industrial and regional breakdown of the operations of the multi-establishment multi-industry firm. Reconciliation of taxation data with DBS data for these multi-establishment firms is the most difficult part of the feasibility studies being made. For some items, the aggregates of DBS establishment reports agree reasonably well with the totals given in the company tax statement while for others, there are significant differences which can be explained only by contacting the company.

The single establishment or single plant company, where the tax return and the DBS return are for the same entity, presents fewer difficulties. The problems which arise here are more often than not those of definition: differences of concept or understanding of concept and differences in accounting terminology or practices, and economic or statistical terminology or practices. The end result is that similar items are often placed in different categories. From the work done to date, there is evidence of the need for closer collaboration between the economist concerned with the formation of concepts, the statistician concerned with collecting the data as prescribed and the accountant or member of the accounting firm supplying it. Many of the differences observed might be corrected by minor changes in accounting practices or DBS questionnaires, or by acceptance by DBS of the accounting data as currently produced.

Work done to date on which many of the previous observations are based include:- (1) an examination of American literature on work in integrating taxation data with various surveys made by the United States government agencies; (2) a series of meetings and discussions with the pertinent officers of DBS concerning the problems of this integration work, and the type and scope of feasibility studies which might be undertaken. This was followed by preparation of a document outlining the course investigations might follow and the purpose and possible benefits of the studies planned. Some of the more important studies were: (a) An examination of a cross-section of DBS establishment returns to determine if these were filled out by the accounting departments of respondents to determine if tax data and DBS data were supplied from the same source. (b) Comparisons were made, for a sample of single establishment corporations, of data supplied in various DBS surveys with similar data for the same corporations which were extracted from the profit and loss portion of the financial statements attached to their tax returns. (c) Similar comparisons to those described in (b) were made for all firms in the Paints and Varnishes Industry. This included both multi- and single-establishment corporations. A paper was prepared on the results. (d) Spot checks were made for a number of firms of the adequacy of taxation files as a source of data for respondents failing to file a DBS return or having filed an incomplete one. (e) A sample of 6,000 unincorporated tax returns in a variety of industries was examined to determine the adequacy, for DBS purposes, of the data they contained. These businesses were identified by type of business only. The name of the business or the taxpayer was not included on the transcript cards prepared for this study by the Department of National Revenue so that careful examination of the information transcribed could be made without identification of the individual being possible. Extensive tabulations of the transcript cards which contained more than 100 items have been made and a paper on the results is in the course of preparation. In the meantime, considerable use has been made of the tabular material by several DBS divisions. (f) Plans were made for the tabulation of tax data for a large sample of incorporated companies in the wholesale trade and service areas. Work is now underway on this project.

All of the above work requires the promotion and maintenance of contact with senior officials of the DBS and the Taxation Division of the Department of National Revenue. Close liaison is maintained with the Central Classification Staff concerning industrial coding procedures as they affect integration studies. A number of comparisons of coding practices in the areas under study have been made.

Special Manpower Studies and Consultation

The analytical research program of the staff proceeded with studies of selected aspects of the Canadian manpower situation. These included the following *Special Labour Force Studies*: Niveau d'instruction de la population canadienne et de la main-d'oeuvre, 1960-1965; Annual Work Patterns of the Canadian Population, 1964; The Job Content of the Canadian Economy, 1941-1961; Geographic Mobility in Canada, October 1964; Women Who Work: Part 1; The Demographic Background to Change in the Number and Composition of Female Wage-Earners in Canada, 1951 to 1960; and the following *1961 Census Monograph Studies*: Historical Estimates of the Canadian Labour Force; The Occupational Composition of the Canadian Labour Force; Provincial Variation in Labour Force Participation; Unemployment in Canada.

Additional studies under way, for which data has been specially provided, will cover topics such as the post-war immigrant labour force; social and regional aspects of education; working hours; multiple job holding; occupational mobility; child care arrangements of working mothers.

Developmental research was concentrated on the launching of a major new survey of labour demand--the Job Vacancy Survey--undertaken on contract for the Department of Manpower and Immigration. This survey has re-

quired an intensive and continuing program of conceptual and analytical research because of its complexity, size and essentially experimental nature. It has occasioned widespread interest in the United States and abroad.

Problems of a conceptual and analytical nature in respect of the 1971 Census test program were also of major concern in the developmental research activity of the staff.

Consultant on Demographic Research

The 1961 Census monograph on urban development in Canada was published and a draft of the 1961 Census monograph on internal migration in Canada was completed. A draft of the 1961 Census general review bulletin on migration in Canada was completed.

A special 1961 Census tabular bulletin on migration and marital status was completed and published. The drafts of two additional special census tabular bulletins--one on migration of the labour force and one on migration to metropolitan areas--were completed.

Data and advice on urban development were provided to the Economic Council of Canada for a chapter in the Fourth Annual Review of this Council. In addition, the Consultant served on four committees engaged in the planning of the Census Tests.

ECONOMIC ACCOUNTS BRANCH

The Economic Accounts Branch is responsible for the assembly and analysis of statistics within an overall national accounting framework, through its Balance of Payments and Financial Flows Division and the National Accounts, Production and Productivity Division, the Current Business Indicators Section and the establishment and maintenance of data banks of economic time series.

Balance of Payments and Financial Flows Division

The Balance of Payments and Financial Flows Division is concerned with the construction, analysis and publication of statistics and reports related to two important sets of economic and financial relationships. The first of these involves estimates of the balance of payments covering economic and financial transactions between Canada and other countries and estimates of Canada's interna-

tional investment position, measuring and exploring the country's external assets and liabilities. The second set of relationships is embodied in a comprehensive set of financial accounts, setting out intersectoral claims and revealing the process by which real and financial resources are transferred within the Canadian economy.

The current publication program of the Division includes quarterly and annual reports on the balance of payments with annual detail on Canada's international investment position, monthly reports on sales and purchases of securities between Canada and other countries, and monthly and annual reports covering travel between Canada, the United States and other countries. During the fiscal year, two major publications were issued: *The Canadian Balance of International Payments, A Compendium of Statistics from 1946 to 1965* revised and extended earlier data and presented them in

convenient and accessible form, and *The Canadian Balance of International Payments, 1963, 1964 and 1965, and International Investment Position* which brought forward the series published in earlier annual volumes and contained some extended detail including a special analysis of the principal statistics of manufacturing establishments of foreign-controlled enterprises in Canada.

Unsettled conditions in the international exchange and money markets, and balance of payments difficulties in some of the principal countries of the world, were characteristic of much of the year. Under these circumstances, balance of payments statistics continued to attract close attention from the public and from officials, and considerable time was spent in providing guidance to, and elucidation of, available data. Figures for the full calendar year were published early in March. A considerable amount of work was also done for the Watkins' Task Force on the Structure of Canadian Industry. Developmental work has been carried out to provide more extended statistics of Canada's direct investments abroad. Staff of the Division participated in meetings of the Committee of senior officials on the Canada-United States balance of payments, and by invitation, in a meeting of balance of payments statisticians convened by the International Monetary Fund. Staff visits were made to the Central Statistical Office of the United Kingdom and to the Office of Business Economics of the United States Department of Commerce with whom close and cordial relationships exist.

The International Travel Section implemented the new methods necessitated by administrative changes described in last year's report, and coped with the measurement of unprecedented levels of tourism associated with Expo 67 and other centennial activities in Canada. An "automobile exit" survey of United States travellers, carried out in the summer months by a private firm under a contract to which DBS was a party, yielded expenditure estimates generally consistent with those obtained under the continuing methods employed in the section.

Developmental work in the Financial Flows Section proceeded during the year, but due to staff vacancies did not reach publication stage. The importance of this project has been underscored by the severe pressures experienced during the year in the capital market, and in the consideration of other policy matters such as tax structure. Arrangements were made for Canadian participation in two meetings of the *ad hoc* group of financial statisticians established by the Organization for Economic Co-operation and Development.

National Accounts, Production and Productivity Division

The National Accounts, Production and Productivity Division co-ordinates, processes and analyses information from a variety of sources. This encompasses responsibility for the national accounts income and expenditure flows, the work on gross domestic product by industry in both current and constant prices, (the latter including the index of industrial production), and the development of measures relating to the aggregate productivity performance of the Canadian economy and its major sectors. The division is also responsible for the production of the *Canadian Statistical Review* and the concomitant production of monthly articles for this publication as well as further development and research of seasonally adjusted data.

Regular publications of the division include the following: *National Accounts, Income and Expenditure Statements*, quarterly and annual reports; the monthly publication of the *Indexes of Industrial Production* and the *Quarterly Indexes of Non-Agricultural Real Domestic Product* as well as the annual publication of the *Survey of Production* which deals with the output of commodity producing industries on a provincial basis. In the area of productivity, indexes of output per person employed and per man-hour are published annually for the commercial economy and its major components. The available detail now includes separate measures for the commercial goods- and service-producing industries as a whole. At the individual industry level, substantial progress was made on the preparation of a special report on iron and steel mills.

In addition to the provision of day-to-day assistance to many business, academic and government users, considerable material was furnished to such government agencies as the Departments of Finance, Trade and Commerce, the Economic Council of Canada, and the Bank of Canada for the preparation of their reports and for their needs in fulfilling their obligations as economic advisers to the government.

Of special interest during the past fiscal year has been the gain in timeliness in the *Index of Industrial Production* which is now published six weeks after its reference month in contrast to the previous time lag of ten weeks. The work to rebase the industry of origin Real Domestic Product system (including the index of industrial production) to a 1961 weight base and to incorporate revisions to the Standard Industrial Classification into these indexes is now reaching completion.

In collaboration with the Economic Council of Canada, further development work

on the improvement of a time series data bank was carried on during the past fiscal year. The existing data bank was used intensively by other federal government departments and agencies and it is hoped to make a more sophisticated use of such a data bank available to the public in the coming fiscal year.

The Division participated in the international deliberations and conferences which are taking place in connection with the proposed revision of the United Nations International System of Standard National Accounts. In this connection, members of the staff attended conferences of working groups on National Accounts and Balances of the Conference of European Statisticians in Geneva as

well as a symposium on these topics held in Warsaw, Poland, and constituted part of the Canadian delegation to the United Nations Statistical Commission.

Two members of the staff prepared a joint paper on *The Measurement of Constant Price Aggregates in Canada* for the International Association for Research in Income and Wealth at Maynooth, Ireland. Another paper entitled *The Service Industries in Canada, 1946-66* was given by a staff member at the Conference on Research in Income and Wealth held in Ottawa, while another member of the staff contributed a paper to a seminar on Government Information Systems organized by the Economic Council of Canada.

FINANCIAL STATISTICS BRANCH

The Financial Statistics Branch, which was formed on January 1, 1967 as part of the reorganization of the Dominion Bureau of Statistics, consists of the Director General of the Branch, the Co-ordinator of Financial Statistics staff, the Business Finance Division, the Corporations and Labour Unions Returns Act Division, the Central Personnel Records System and the Governments Division.

The Financial Statistics Branch was formed in order to increase and improve the comparability, timeliness, and comprehensiveness of financial statistics. This action was particularly motivated by the formation in recent years of the Corporations and Labour Unions Returns Act Division which greatly expanded the amount of financial data available to DBS.

A number of important financial series are located elsewhere--in the Balance of Payments and Financial Flows Division of the Economic Accounts Branch and in the Co-ordinator Consumer Finance Research Staff of the Socio-Economic Statistics Branch. On the other hand, the Financial Statistics Branch is responsible for the production of a number of important non-financial statistical series in the Business Finance Division and the Central Personnel Record System.

Financial Statistics

The Co-ordinator of Financial Statistics includes in his responsibilities advising on the development of new financial statistics and the integration of new and existing series. The objective is to meet the demands of the

users of financial statistics as efficiently and completely as possible.

The responsibility for the development of financial accounts now rests officially with the Balance of Payments and Financial Flows Division. In the absence of a chief of the Financial Flows Section, the Co-ordinator of Financial Statistics has continued in charge of this work. Publication of quarterly financial accounts will begin in 1968.

During the past year, the Co-ordinator Staff has assisted the Governments Division in the development of government series related to the National Accounts and the financial flows.

Business Finance Division

The Business Finance Division is responsible for the development, collection, compilation, analysis and publication of data on a variety of subjects, such as profits, assets and liabilities, capital expenditure intentions and realizations, construction activity, statistics of the construction industry, housing, building permits, scientific research and development, commercial failures and bank debits. The Division is also responsible for the development of estimates of financial flows for the corporate sector of the economy, as well as estimates of flows and stocks of capital goods in the economy.

In recent years the Financial Statements Section has been concerned with quarterly financial data taken from balance sheets and

operating statements of all the financial and non-financial corporations. It became evident that the financial sector, because of its importance, complexity and ramifications, required special attention in survey approach. During 1967, a new Section--the Financial Institutions Section--was formed to deal specifically with the task of developing surveys of all financial institutions. The Section continued the collection of quarterly balance sheet data of trust companies, mortgage loan companies, sales finance and consumer loan companies and fire and casualty insurance companies, investment dealers, and mutual and closed-end investment funds. During the year estimates of credit unions were developed jointly with various provincial government officials and members of the credit union movement. Additional work is planned on life insurance companies, chartered banks, holding and management companies, business finance companies and real estate development companies. As the surveys are implemented, the results will be incorporated in the regular quarterly publication *Business Financial Statistics*. In the long run, the objective is to offer quarterly data for all the categories of financial institutions on balance sheets, revenue and expense statements, retained earnings statements, and sources and uses of funds statements.

The Financial Statements Section which, as a result of the organizational change, is concerned with non-financial corporations, continued its surveys of quarterly corporate profits of the non-financial sector. The results of this survey are published in detail in the quarterly report *Corporation Profits*. The Section also continued its work in the development of quarterly balance sheets, income and expense statements, and sources and uses of funds for each major industry group for each quarter since 1962. The availability of more recent annual data from the Corporations and Labour Unions Returns Act Division will enable the Section to up-date the benchmark data of 1962 which has been used as a base for projecting the quarterly data from the sample survey. Where necessary, corrections will be made to the historical series going back to 1962. The publication of such a series is expected to be late in 1968, even though they may be considered as experimental owing to the number of technical problems still to be solved in this difficult area.

Most of the development work of recent years in the above two Sections of the Division has been related to the production of financial flows in the corporate sector of the economy. Considerable work was carried out in both Sections during 1967 to derive quarterly estimates of such flows to be included in the forthcoming DBS publication on the national

system of financial accounts which cover all sectors of the economy.

In the Capital Expenditure Section, existing annual surveys are being continued to provide national, regional and industry estimates of intentions for the year ahead and realizations for the past year on capital and repair expenditures, on new construction, and on new machinery and equipment. The need for more current data on investment as an economic indicator has been expressed strongly in the recent past by policy-makers as well as the business community itself. As a result, during 1967, a new unit was established in the Capital Expenditure Section to undertake the development of a quarterly survey of investment intentions and realizations. This development work was well advanced by the end of the year and implementation of the survey is expected to take place in the second quarter of 1968. Plans are to use a representative sample of firms sufficient to yield good estimates for the business sector of the economy. It is not intended, at least for the time being, to conduct a survey large enough to provide industry and regional detail.

Over the many preceding years, the size of the capital expenditure surveys permitted the estimation of investment intentions by industry, by province, and the results were published in *Private and Public Investment in Canada, Outlook* at the beginning of each year. However, the results of the mid-year survey of revised intentions were available for each industry group as national totals only, owing to the fact that the latter relied on a sample of the respondents included in the original intentions survey. In June of 1967 all respondents in the original survey were requested to revise their earlier estimates and for the first time it was possible to publish revised estimates of intended capital outlays by industry and by province. In 1968, it is expected that the provincial series will be published in *Private and Public Investment in Canada, Mid-Year Review* at the same time as the national totals. In 1967, it was necessary to release provincial totals much later than national totals owing to the sudden increase in the workload.

Early in 1967 a special experimental survey was developed to produce a limited range of selected qualitative company information as a follow-up to the investment intention survey. The emphasis was placed on capacity utilization, sales outlook, financial considerations and other economic factors affecting investment, in order to provide some guidance in the evaluation of the 1967 program of capital expenditures. After considerable effort to improve the questionnaire in the light of this first experience, the survey is

being repeated early in 1968. This qualitative approach is new in Canada and, at this point, considerable research in methodology needs to be done before deciding whether this kind of survey will be a permanent feature in the range of surveys on investment.

It has been recognized for a long time that estimates of capital formation in the mining industry (excluding oil and gas mining) needed substantial improvement. While the capital expenditure surveys were being used as a vehicle to obtain estimates of related mining expenditures as well, such as exploration, it was found extremely difficult for the respondents to try to separate what is considered capital formation from non-capital outlays because of insufficient clarification of the conceptual approach which led in turn to inadequate questionnaires. Consequently, national totals, not to mention provincial detail, were not very reliable. In 1967, with the excellent co-operation of representatives of the industry, provincial government officials and other federal government officials, it was possible for the Business Finance Division and the Manufacturing and Primary Industries Division of DBS to design a new questionnaire and new survey procedures for this important industry. The new questionnaire which is the product of many consultations with all the above groups is quite elaborate but is believed to be very practical by respondents in the industry. Moreover, the new procedure meets the requirements of DBS, the Federal and Provincial Departments of Mines and other prime users, thus eliminating most of the existing duplication. At the same time, the new survey, which was implemented in January of 1968 for the year of 1967, covers non-producers which, except in Quebec, were never before reached by a survey. Joint collection agreements have also been reached with Nova Scotia, Quebec and British Columbia. The survey covers exploration, development, capital and repair expenditures and other selected activities.

Other work during the year included the continuing program of improvement of existing surveys, such as further refinement of the oil pipeline questionnaire, initial work in the development of a new approach for the electric power industry and the selection of a new sample for the wholesale trade.

Late in 1967, a project was started using statistical information already existing in Business Finance Division and in the Corporations and Labour Unions Returns Act Division. This project is an attempt to measure capital spending by foreign-owned firms in Canada as compared with firms controlled by Canadian residents. From preliminary results already made available through this project, it is possible to distinguish certain trends in the

pattern of spending. On the other hand, considerable work remains to be done to estimate the magnitude of the spending of foreign-owned firms as compared with the total capital expenditures in Canada.

In addition to the construction data provided in the investment reports which show expenditures on construction, both new and repair, as reported by organizations paying for the work done, another report published in June of each year and entitled *Construction in Canada* provides information on value of work put in place by type of structure along with overall estimates of the labour and material content of this work. This report, issued by the Construction Section of the Business Finance Division, also provides separate estimates for the value of work performed by construction contractors and that performed by others engaged in construction work on their own account, as well as an estimate of the equivalent man-years necessary to carry out the annual program of construction. Information on types of structure is derived from the capital expenditure surveys mentioned earlier, which obtain information on the labour and material content of own-account construction. The labour and material content of the construction contractors is derived from the results of a sample survey of construction firms conducted annually by the Construction Section. The sample is too small to provide detailed statistics on the construction industry other than grand totals for labour and materials.

During 1967, the Construction Section undertook a study aimed at determining the feasibility of a census of the construction industry. Such a survey is necessary owing to the paucity of data on the organization of the construction industry and its operational characteristics. In addition to this reason a complete set of basic industrial statistics in a detailed form is required in order to begin measuring its real output and productivity in a more adequate fashion. As part of this developmental program, considerable time was spent on negotiations and studies with representatives of a major sub-industry group of contractors with the purpose of undertaking a census of that particular group. Implementation of this census is planned for August 1968 and will constitute the pilot study to determine the feasibility of undertaking on a gradual basis full coverage of the construction industry.

The Housing and Building Permits Section publishes a monthly report on building permits, which provides data on the number and value of housing units by type and value of industrial, commercial, institutional and government building construction in more than 1,400 municipalities in Canada. The Section also issues

a monthly report *New Residential Construction* containing the results of a nation-wide survey conducted by the Central Mortgage and Housing Corporation, providing data on dwellings started, under construction and completed. These physical measures of housing are translated into value for the purpose of estimating quarterly and annual residential capital formation. In addition to producing current housing and building permit statistics, the Section has, during 1967, made substantial progress in a very involved developmental project aimed at designing a method of measuring quarterly housing investment taking into account seasonal variations, regional differences and changes in housing characteristics to replace the existing global method which is far from adequate, particularly in times of change in housing activities. The new method will be ready for implementation later in 1968 and relies to a large extent on the systematic use of certain administrative records made available to DBS by the Central Mortgage and Housing Corporation.

In 1967, the Division completed a project designed for the purpose of reconciling the data on the stock of dwelling units as measured by the decennial Census of 1951 and 1961 with the intercensal activities in housing as measured by the starts and completions surveys. This project was undertaken because there appeared to be a substantial discrepancy between the net intercensal change in the housing stock as measured by the Census and the measures of intercensal activities. It was necessary to isolate, measure or estimate the diverse "gross" activities (completions, demolitions, conversions, mergers, change in uses and change in vacancy status) which created the net change in the number of dwellings as calculated by subtracting the 1951 from the 1961 stocks of dwellings. In the absence of data on these activities (except for completions) various assumptions had to be made and a number of estimates had to be made as well. Changes in population, household formation and persons per household ratios were used as checking devices. In addition, it was necessary to re-introduce comparability between the 1951 and 1961 Census definitions and methods of aggregating. The reconciliation project revealed that the intercensal activities had been understated and the results are going to be incorporated in a revised series of housing investment for the period 1951 to 1967.

The Scientific Activities Surveys Section has two regular surveys on scientific research and development: one on the Federal Government's activities and one on the Canadian industry. In 1967 the survey of the Federal Government was converted to an annual survey. The industry survey will continue to be biennial for the time being. *Industrial Research*

and *Development Expenditures in Canada, 1965* was released during 1967 and presents, among other information, estimates of outlays on current research and development, sources of funds, field of research, type of research and scientific manpower utilized. Preliminary results from the 1965-66 survey of Federal Government expenditures on scientific activities were also released during the year. The Section has been heavily involved with other agencies interested in the field of scientific activities, particularly the Science Secretariat and the Department of Industry, in the design of specialized surveys and in the preparation of special reports and compilations.

Since 1963 the Division has worked with the Directorate for Scientific Affairs of the Organization for Economic Co-operation and Development in its efforts to standardize research and development concepts and practice for facilitating international comparisons and to promote further refinements in measurement of research and development and its implications. This co-operation was particularly close during the last fiscal year when the Chief of the Scientific Activities Section was attached to the OECD headquarters in Paris for two months at the request of the latter organization.

The National Wealth and Fixed Capital Stock Section released two major publications early in 1967. The first, *Fixed Capital Flows and Stocks, Canada 1926-1960 - Methodology*, contains a review of the concepts, sources and methods used in the preparation of the statistical material on flows and stocks of capital goods in manufacturing industries. The second, *Fixed Capital Flows and Stocks, Manufacturing, Canada 1926-1960 - Statistical Supplement*, is a complete tabular presentation of the statistical material. Since then, the Section has prepared further estimates for the years 1961-1966. These estimates are based on the 1948 Standard Industrial Classification since as yet the difficulties associated with developing estimates based on the 1960 revised SIC have not been overcome. Work also progressed on the development of estimates for sectors other than Manufacturing and, as a result, it is expected that preliminary estimates for a number of sectors will be completed during 1968.

The Division has continued to publish quarterly reports on commercial failures in Canada. These reports are based on material supplied to the Bureau under the provisions of the Bankruptcy and Winding-Up Acts. The number of failures and the amount of liabilities involved at the time of bankruptcy are published by region and by industry. Reports have also been issued monthly and annually on the total value of cheques cashed in fifty-one

clearing centres in Canada from material supplied by the Canadian bankers' Association.

Central Personnel Record System

The Central Personnel Record System was established by Treasury Board Minute 654427 dated April 12, 1966. The decision to form this division was primarily based on a recommendation of the Glassco Commission "that personnel statistics for the Public Service be centrally tabulated by the Dominion Bureau of Statistics for use of the Treasury Board, the Civil Service Commission and departments".

The basic purpose of the system is to provide the central agencies--in particular, the Treasury Board, the Public Service Staff Relations Board and the Public Service Commission--with data on the manpower of the Federal Public Service to assist in determining policy on manpower management. The System is also used to produce statistical information for the publication *Federal Government Employment* prepared by the Governments Division.

During the year the initial file was established through the merging of previously existing record systems maintained at the Public Service Commission and DBS. Validation of the file content with departmental records has commenced and will continue until all records have been confirmed. The planning of file extensions to include employees not previously covered and to acquire additional information not previously recorded is well under way.

Data for use of the Treasury Board and other management agencies of the Federal Government are commencing to flow out of the system. A Survey of Benefit Usage for collective bargaining purposes was produced for Treasury Board and covered the scientific and professional, administrative and foreign service, technical and administrative support categories for the fiscal year 1966-67.

CPRS and the Department of National Health and Welfare have undertaken a co-operative project to develop departmentally oriented reports from the CPRS system. The project is now well advanced with departmental personnel having validated and extended the records to cover additional employees, positions and data elements not previously recorded. CPRS has almost completed a series of programs to produce tables and listings of value to the department. These are tables of general value which will be produced for other departments with little or no modification in most cases.

The establishment of the CPRS brought to a head the problem of personnel action

forms in the federal government sphere. The essential elements were:- (1) too many forms, in many cases with duplicating or overlapping functions; (2) lack of standardization in size, sequence and style; and (3) unsuitability for data processing purposes. To overcome these problems and generally improve the paper-flow systems associated with personnel activities, the Treasury Board authorized a Personnel Forms Study which has progressed to the stage where it is anticipated that new forms will be in service during 1968-69.

Corporations and Labour Unions Returns Act Division

The Corporations and Labour Unions Returns Act Division is responsible for annual corporation financial statistics for the Canadian economy including operating statistics, balance sheet data, profits and income taxation; for statistics relating to the ownership of a group of larger corporations; and in addition, for annual information on labour unions in Canada. The passage of the Corporations and Labour Unions Returns Act in 1962 required the establishment of a new program within the Dominion Bureau of Statistics to examine the extent and effect of non-resident ownership of larger corporations in Canada and the extent and effect of the association of organized labour in Canada with international unions. The magnitudes of these international associations have been established in broad terms in the annual reports published under the Act. At the present time work is continuing to further refine these magnitudes and to make the data as useful as possible.

In 1965 amendments to the Corporations and Labour Unions Returns Act permitted the extension of the analysis of corporation financial activity to all corporations in Canada. The program developed and implemented for corporation fiscal years ending in 1965 was an extension of the corporation financial statistics program carried out by the Department of National Revenue for some years and published in *Taxation Statistics*. The new program introduced a number of amendments to the statistical series which should prove useful to users of these statistics.

In 1967, the publication *Foreign-owned Subsidiaries in Canada*, a joint project of the Department of Trade and Commerce and the Dominion Bureau of Statistics, was released. This publication was based on a special survey of the larger foreign-owned subsidiaries in Canada and contained unique information on the financing and operations of these companies. During the year some additional work was performed to complete the statistical basis for the Watkins' report to the Cabinet Task Force on Foreign Ownership.

It is expected that the corporations section of the *Taxation Statistics* publication, for which the Department of National Revenue was formerly responsible, will be published early in the 1968-69 fiscal year covering data for corporation fiscal periods ending in 1965.

Governments Division

Effective January 1, 1967, the former Governments Section of the Governments and Transportation Division was established as the Governments Division. During the year 1967-68, considerable time was spent by senior personnel of the Division in assessing and defining the role of the Division and the scope of its financial statistics program, and in developing a plan of organization indispensable to the more efficient administration of the Division under which the rapidly growing interest in and demands for government financial statistics might be met.

As an integral part of the latter, explanatory material on the Division's program was prepared and will be incorporated in the near future into a brochure for distribution to government finance officers. It is hoped that through this medium officials will become better acquainted with the range of statistics now available and thus be in a better position to plan and conduct analyses of particular interest to them.

Throughout the year, the Division continued to provide consultative services through representation on various committees. Members of the Division served with the secretariat of the Tax Structure Committee and advised on the quality and timeliness of the analysis of revenue of Provincial Governments and on the suitability of available data for inclusion in the new formula for Federal-Provincial equalization payments. The Division also assisted in drafting the technical wording of the Federal-Provincial Fiscal Arrangements Regulations, 1967, which require the use of DBS statistics in the calculation of equalization payments.

The Division was represented on the continuing committee of the Interdepartmental Committee on Expenditure Coding established under the auspices of the Comptroller of the Treasury to develop a coding system for the economic analysis of federal government expenditure, commencing April 1, 1968. The Division has undertaken to define in the required detail the economic objects of expenditure which conform closely to the classification used in the National Accounts framework; to examine annually the economic object-line object relations established by

departments and agencies and to make recommendations on the compatibility thereof.

In addition, the Division was consulted by the Province of Ontario on the development, for its own use, of a coding system similar to that presently being implemented by the federal government for economic analysis purposes. It is hoped that this growing interest in a systematized classification of expenditures will permit the development by this Division, of a model matrix-classification system of Government expenditure which would provide financial statistics on both the functions of government and the objects of expenditure--i.e. the cost to government of the services it provides and the objects on which it makes expenditures in the provision of such services.

During the year the Division provided suggestions on the feasibility of a study of the revenue capacities of the Yukon Territory which is being conducted by other departments of the Federal Government. It also assisted the Canadian Council on Urban and Regional Research in its survey of federal, provincial and selected local governments to determine their expenditures on urban-regional research.

The Division represented DBS at the Eighth Federal-Provincial Conference on Municipal Finance Statistics and also provided the secretariat for the Conference. The Eighth Conference differs significantly from its predecessors in origin, form and program. The need for this Conference was clearly indicated at an earlier conference of users of municipal finance statistics, jointly sponsored by the Canadian Tax Foundation, the Canadian Council on Urban and Regional Research, the Institute of Local Government of Queen's University and DBS, which was held at Queen's University in June 1966.

The Eighth Conference was convened by DBS and was the first of these conferences to meet outside Ottawa and to have an agenda planned for discussion in stages over a period of years. The First Session, which was held at Victoria in April 1967, recommended that DBS review the form and content of the basic statements recommended for municipal use in the *Municipal Finance Reporting Manual* (3rd Edition, 1960) and make recommendations for their revision to the Conference. DBS is also to make recommendations on the desirability of incorporating a classification system to permit economic analysis in a revised edition of the *Manual*. The first recommendations on classification of accounts are now being circulated to the participants at the Conference. The Second Session, which will consider the recommendations, will convene in late May or early June 1968.

ECONOMIC STATISTICS BRANCH

This Branch covers the operations of six divisions and an "Input-Output" research and development staff. Branch activities are principally concerned with the collection, processing, analysis and publication of statistics derived from business establishments. These consist, in general, of production, sales and service "units" in contrast to the reporting universe of the Financial Statistics Branch which, so far as the private sector is concerned, deals with companies.

For the most part the collection of the information is carried out by means of hundreds of monthly, quarterly and annual "mail type" surveys of varying sizes although a number of "enumeration type" surveys are also involved. The Branch tends to concentrate on production or sales of commodities and services, materials used, employment, prices and imports and exports of commodities.

As a result of the general ceiling imposed on the DBS establishment during the past year the Branch was called upon to give up a number of positions and re-allocate others in order to meet the most urgent Bureau and Branch priorities, principally the programs of the Operations and Systems Development Branch and those of the Prices and External Trade Divisions. The consequence was a certain curtailment and stretching out of statistical programs and services in the areas of transportation, merchandising, manufacturing and labour research. The establishments of the divisions concerned were reduced by a total of 37 positions. Despite these constraints, however, heavy emphasis was placed on achieving the objectives of the 1967-68 timeliness program. During the year, the Branch worked very closely with the Bureau's Timeliness Committee in mounting a determined drive to improve the efficiency and timeliness of major monthly series produced by the Branch. These consisted of the monthly surveys of Employment and Payrolls; Manufacturing Inventories, Shipments and Orders; Retail Sales; Imports and Exports; and the large number of individual commodity surveys in the manufacturing, mining, forestry, fishing and energy fields. This program has had a solid success and has resulted in substantial overall gains in timeliness. Some of the details are outlined below in the divisional reports. It should also be noted that the earlier availability of the monthly commodity data has made it possible to release the monthly *Index of Industrial Production* more than three weeks earlier than was the case a year ago.

External Trade Division

The External Trade Division is responsible for the production of Canada's export and import commodity trade statistics. The monthly, quarterly and annual publications of the Division provide data on trade by country and commodity, by province of customs clearance and by stage of fabrication; on exports by mode of transport, by province of lading, and on imports by tariff item.

A complete reorganization of the work and personnel of the Division was undertaken during the year. The operations program was restructured to produce more effective processing of the import and export customs documents, which in total are now arriving at a rate of almost one million per month. Separate sections were set up for import and export operations. Within each section the commodity classification clerks were divided into document processing teams, specializing in broadly homogeneous groups of commodities. This procedure has enabled those involved to develop a greater degree of specialization concerning their sector of the commodity classification, leading to significant improvements in the quality and timeliness of the trade reports. The gains in timeliness have been particularly noteworthy in the release of import information, amounting by the end of the year to approximately six weeks.

There have been a number of other developments in the operations program. The timeliness of export information has been improved by transferring the production of data to the Bureau's computer installation from the slower unit record machinery. At the end of the year, prospects were good for further progress in this respect. Improvements in the clerical recruitment situation made a further contribution to timeliness. Another development in the operations area has involved the testing of a document reader. If these tests prove successful, the opportunity will arise to bypass the key-punch aspect of our processing procedure, thereby resulting in an additional gain in timeliness of two days per month.

The continuing task of revising the Export and Import Commodity Classifications was pursued during the year. A number of improvements were made and are shown in the 1968 editions of the Classifications. Substantial assistance was provided by a number of commodity specialists who were engaged during the year. The expectation is that there will be many further far-reaching developments in this area during the coming year.

The work of the Division continued without the benefit of adequate professional resources, although some improvement was noted in the staffing picture. A great deal of time and effort was devoted to setting up and testing a sampling procedure for processing entries pertaining to imports from the United States. This project is still in progress and it is expected that, should the testing prove successful, important gains should be achieved in timeliness and cost reduction. The acquisition of additional professional staff during the year enabled the Division to undertake a number of trade studies, and determined efforts were made to eliminate the serious backlog in the Division's annual publications, particularly in the analytical field. We confidently expect these efforts to bear fruit during the coming year.

Much attention has been devoted to means whereby the physical preparation of the current reports may be hastened and their appearance improved. Studies have been undertaken to assess the possibilities of increased computerization in this area and to bring about a reduction of clerical involvement. The results of this work should also be seen soon. In sum, the Division as a whole has been mounting a concerted attack from all sides on the problem of producing more quickly than heretofore the publications which are its responsibility. Progress has been made, as will already be apparent to users, and 1968-69 should see considerable further improvement.

Input-Output Research and Development

The Input-Output Research and Development Staff is engaged in the compilation and updating of national and selected regional input-output tables which depict flows of goods and services through the economy. It undertakes research into input-output concepts and methodology and provides technical advice and statistical assistance to producers and users of such tables. Within the framework of the DBS statistical system, the Input-Output Staff is engaged in reconciling diverse estimates and formulating methods for improving the general integration of the statistics required by a detailed social accounting system.

Work on the preliminary version of the 1961 Input-Output Table was reaching its final stages by the end of the fiscal year. The studies associated with this project have provided a new and consistent set of data on the production and disposition of 640 classes of goods and services. The disposition comprises 179 industrial sectors as well as several categories of final demand. These commodity balance studies provide, within a scheme that is consistent with the implementation of a broad DBS social accounting frame-

work, information on the available supply and use of all goods and services. Work on these studies has uncovered areas in which DBS data need further improvement. Work was commenced on a detailed study of the goods and services purchased by all levels of governments. This project, which has involved considerable work this year, is to be completed in the coming year and will provide data which is currently unavailable for input-output and general analytical purposes.

During the fiscal year the Input-Output Staff produced the preliminary detailed estimates of "value added" and its components for each industry in the business sector. This work is providing the basis for a revised industrial distribution of Gross Domestic Product for the base year 1961 and is a major component of the industrial weights assigned in the Index of Industrial Production. A study of the components of "value added" has been useful in revising earlier estimates and has lead to an overall improvement in the aggregate.

The Input-Output Staff provided technical advice and assistance to various government departments and agencies at both the federal and provincial level. Discussions have taken place with the Economic Council of Canada, the Atlantic Development Board and the Department of Industry on the broad concepts and uses of input-output analysis as well as specific components of input-output tables. The Staff is, in addition, currently working on an up-dating to 1965 of the Input-Output Tables for the four Atlantic Provinces under a contract with the Atlantic Development Board which also involves various analytical tabulations.

Detailed tabulations of trade and transportation patterns necessary for the construction of input-output tables were also made available to provincial governments engaged in this work.

Labour Division

The Labour Division is concerned with production of a broad and varied program of establishment surveys and administrative statistics. The subject matter covered includes statistics of labour input and labour cost, occupational job vacancies, pension plans, and data relating to the operation of the Unemployment Insurance Commission and the Canada Manpower Service of the Department of Manpower and Immigration. During 1967-68, a number of changes took place in the organization and functions of the Division. The Job Vacancy Survey Section, established in early 1967, was staffed to operational levels and a mail survey of large establishments in the

manufacturing industry initiated in September. A new unit was established in the Employment Section to initiate a survey of employer labour costs in January 1968. The Unemployment Insurance, Manpower and Pensions Section was separated into two sections: (1) Unemployment Insurance and Manpower; and (2) Pensions.

The Employment Section is responsible for the preparation of employment indexes, statistics of hours and earnings and labour income. Employment aggregates by industry and province are also published on a regular basis. In 1968, the functions of the Section were expanded to include periodic surveys of employer labour costs. During the reference period, a major preoccupation of this Section was the investigation of the application of computers to improve timeliness in the production of employment, hours and earnings data from monthly surveys. Early in the year, automated mailing and follow-up procedures were introduced using computer printouts in conjunction with automated mailing equipment. The use of photocopy was also introduced about the same time to largely eliminate typing of statistical tables. These changes resulted in an appreciable improvement in efficiency and timeliness.

Additional major improvements in timeliness were realized as a result of the introduction of early cutoffs and improved manual imputation procedures. Thus, by the end of the year, release time for the preliminary monthly employment, hours, and earnings data was reduced by some four weeks. Mechanized editing and imputation procedures now in course of preparation will improve timeliness still further next year.

Coverage of employment aggregates by industry and province were expanded by the inclusion in February 1968 of data for federal and provincial government, educational institutions, and hospitals. These data have been collected for some time but were not published until their statistical validity could be checked. With the addition of the new estimates, the aggregates will provide data for all of the commercial non-agricultural labour force and a large part of the non-commercial sector.

Following analysis of the results of a pilot survey conducted last year, a full-scale survey of employer labour costs in the manufacturing industry was initiated in January 1968. This involved extensive planning and consultation with a number of large firms and with the Canadian Labour Congress. To avoid duplication of effort, the survey was undertaken in co-operation with the Department of Labour, Economics and Research Branch, and the Pay Research Bureau.

The Unemployment Insurance and Manpower Section is responsible for compiling statistics reflecting operations of the Unemployment Insurance Commission and the Canada Manpower Service of the Department of Manpower and Immigration. Unemployment insurance was expanded to cover agriculture on April 1, 1967. This involved extension of the statistical program to provide information regarding the number and characteristics of covered persons in agriculture and arrangements for producing statistics regarding claims from this industry. In connection with proposed revision of the Unemployment Insurance Act, Bill C-197 to become effective July 1, 1968, a number of investigations were carried out for the Unemployment Insurance Commission by the Section.

During 1967, a series of discussions took place with the Department of Manpower and Immigration regarding revision of basic statistical reporting documents and related procedures concerning the operations of the Canada Manpower Service. It is expected that as a result of the stabilization of statistical reporting procedures and documents it will be possible to proceed with plans for introducing a monthly publication to provide the interested public with official statistics regarding the operations of the Canada Manpower Service.

The Pensions Section is responsible for the collection and publication of information from an annual survey of trustee pension plans. The Section also undertakes periodic surveys of all pension plans in Canada, and special investigations to meet needs of the pensions industry. During 1967 the results of a survey of all pension plans taken in January 1966 were released. This survey provides a variety of information concerning number and type of plans, number of persons covered and, for the first time, number and characteristics of persons retiring on pension and earnings of such persons before retirement in relation to pension income. Early in 1968 a project proposal was approved providing for the initiation of a small new quarterly survey of large trustee pension plans to provide current information concerning financial flows generated by these plans.

The new Job Vacancy Survey Section is responsible for a monthly survey of occupational job vacancies carried out under contract for the Department of Manpower and Immigration. The primary objective of the program is to develop information which will be used in determining selective policies regarding immigration, vocational guidance and training programs for the unemployed. The results should also be useful in increasing the effectiveness of the Canada Manpower Service operation. Following signing of a contract

with the Department of Manpower and Immigration in March 1967, the Job Vacancy Survey Section was organized in the Labour Division with responsibility for production of job vacancy statistics. The officer in charge of the Section is also responsible for co-ordinating collection and interview operations carried out by the field staff of the Special Surveys Division. During the summer of 1967, mail and interview questionnaires were designed and a program of interviews of large firms in manufacturing was initiated to determine the locus of information in each company for reporting job vacancies. In September the first mail-out of questionnaires to large establishments in the manufacturing industry took place on schedule. Emphasis in the latter part of 1967 and early 1968 has been on the development, in co-operation with Sampling Surveys and Research Staff, and the Operations and Systems Development Staff, of a computerized system for sample selection, maintenance, mail-out of questionnaires, editing of returns and tabulation of results. Attention has also been given to expediting "profiling" of larger firms in additional industries and the recruitment and training of staff.

In the Analysis and Development Section the full implementation of the analysis and development program was deferred as a result of the reallocation of professional positions during the year. During the period, however, at the request of Treasury Board, an investigation of all labour survey activities of federal government departments was undertaken by the Section. This survey is designed to reveal areas of duplication of effort and to result in recommendations for elimination or reduction of these areas of duplication through arrangements for joint collection and consolidation of survey activities. It is expected that the report will be available by mid-year.

Senior Officers of the Division attended a number of international conferences, including the Inter-State Conference of Labour Statisticians at Toronto in June 1967, the annual meeting of the American Statistical Association in Washington in December 1967, and at meetings of the Committee on Labor and Social Security Statistics of the Inter-American Statistical Institute in Washington in March 1968.

Manufacturing and Primary Industries Division

The Division is responsible for the development and maintenance of a co-ordinated program of industry and commodity statistics in the fields of manufacturing, mining, forestry, fishing and energy. Information is obtained by means of several hundred current and annual "mail-type" surveys as well as a quinquennial "enumeration-type" survey. The

results of these surveys are made available to the various users in the form of publications, special statements or special tabulations.

To fulfill these responsibilities the Division is organized into eight main sections: Analysis and Development; Integration and Response Analysis; Metals and Chemicals; Foods, Beverages and Textiles; Forestry; Energy and Minerals; Shipments, Inventories and Orders; and Operations. A separate administrative staff is responsible for financial and personnel matters. This organization represents a significant change from the previous year and reflects modification to the Bureau's organization, the introduction of revised financial and personnel procedures as well as changes in statistical responsibilities within the Division.

An interesting development in the activities of the Division, other than those of a statistical nature, has been the emphasis on training programs at all staff levels. In total, 678 man-days were spent on courses covering such varied subjects as systems, financial and personnel management, statistical concepts and procedures and language training; the last mentioned accounted for approximately 50 per cent of the total. In addition to this program for divisional staff, officers participated in training programs for several foreign students who were attached to the Division for various periods during the year.

Again this year, emphasis was placed on improvements in timeliness, quality (involving the completion or continuation of several major projects undertaken in previous years) and the undertaking of several *ad hoc* projects as a service to major users.

Timeliness of the annual Censuses has improved somewhat over the previous year through the introduction of a series of preliminary bulletins. These provide the user with the following basic industrial statistics: (a) principal statistics - industry by province; (b) selected commodity statistics - by industry - Canada; (c) principal statistics - total manufacturing by counties, cities and census metropolitan areas; (d) principal statistics - seven largest metropolitan areas; and (e) summary statistics on size of establishments for Canada and the provinces. Bulletins covering the first two of these items have resulted in the release of statistics for some 30 industries of the 1966 Censuses and represents an improvement in timeliness of some four to five months. Bulletins related to the last three items have enabled summary data to be released on the 1964 and 1965 Censuses of Manufactures which are delayed due to the implementation of the computer print-out program.

The monthly commodity surveys, which provide detailed information on output, flows and disposition of commodities and which contribute significantly to the construction of the monthly *Index of Industrial Production* have undergone noticeable improvements in timeliness. Each survey was reviewed in terms of timing and response characteristics, and a concerted attack was made to improve response. Primarily as a result of this effort, the majority of the 73 surveys used in the construction of the Index now are available within an acceptable period. This in turn has resulted in an improvement of the release of the Index from more than 60 days to less than 45 days.

A final factor which will have an effect on the timeliness of industry publications for the Census of Manufactures is a recent change in the printing process. By changing to a simpler and cheaper process, printing costs are expected to decline and a significant improvement in the time spent in printing is forecast.

With regard to improvements in quality, the past year has seen the completion of "linking projects" involving the Censuses of Mining and Logging; the completion of tabulations for the quinquennial Census of Fishing and significant progress in developing formats for bilingual publications and questionnaires, all of which were reported upon in last year's report. It has not been possible to implement the Industrial Commodity Classification due to further revisions to accommodate the continuing requirements for the input-output tables. These revisions should contribute extensively to easier preparation of these matrices.

In addition to the foregoing, the Division was successful: (1) in broadening the scope of a number of industries in its annual Census of Manufactures so that commodity detail on materials used will be available on a continuing basis; (2) in introducing two new current commodity surveys dealing with carbonated beverages, and shipments of prefabricated houses and other buildings; and (3) in producing comprehensive total energy statistics at the national and regional levels for the years 1958 to 1964, which material has been incorporated into a paper "Principles and Concepts of Energy Statistics in Canada" to be delivered at the World Power Conference in Moscow, this coming year. It is also continuing the development work in connection with the probability sample for the monthly Shipments, Inventories and Orders survey. At present a number of programs have been written and will be under test within the next month. An interesting and beneficial side effect has arisen from the development of the probability sample universe. This expanded universe has been incorporated

into the present system and has resulted in an improvement in quality of the current provincial estimates, particularly in the Atlantic and Prairie Provinces.

Further improvements in the quality and usefulness of the data produced by the Division are to be expected as a result of participation in the Federal-Provincial Conference on Economic Statistics, the Federal-Provincial Conference on Forestry Statistics, the Provincial Mines Ministers' Conference and in numerous industry-government committees. An outcome of the Federal-Provincial Conference on Economic Statistics worthy of special note is a proposal for obtaining information on interprovincial and foreign shipments of selected commodities. During the past year, the provinces and DBS have been developing lists of specific commodities and surveys will begin during the coming fiscal year. The data obtained will be useful in studies concerning import replacement and industrial development.

A recent development which should assist materially in the publication of uniform statistics by DBS and the provinces as well as prevent the inadvertent disclosure of confidential data was the development of agreed-upon publication procedures by DBS and the provinces. This is an important milestone in federal-provincial statistical relationships, particularly because of its potential effects on suppliers and users of statistics.

Finally, in relation to quality of data, officers of this Division participated actively in the development of statistical concepts and procedures to promote international comparability. Numerous submissions were made to international agencies such as the United Nations and the Organization for Economic Co-operation and Development as well as various meetings concerned with international statistics attended.

Although emphasizing timeliness and quality, the Division undertook major research projects on behalf of other departments; for example, development of extensive statistical material for the Task Force on the Structure of Canadian Industry. A final point of interest is that the Division answered over fifteen thousand requests for information from a wide variety of users in the social and economic communities.

Merchandising and Services Division

The function of this Division is to collect and publish data on the retail, wholesale and service sectors of the economy, as well as to undertake numerous special studies and surveys in areas related to the movement

of goods from the manufacturing level to the final consumer.

A major reorganization of the Merchandising and Services Division was completed during the past year. The purposes of this reorganization were to increase the degree of flexibility and expertise required to ensure that divisional objectives could be met with a minimum of delay as well as to increase the Division's ability to participate in the new methods and procedures which are being implemented within many government departments at the present time. In general terms, the Division has been reorganized into five main sections: administration; current retail and wholesale; services and special projects; quinquennial census; and operations and methods development.

The collection and tabulation of data obtained from the 1966 quinquennial census of retail and service businesses (covering approximately 260,000 retail businesses and service outlets) proceeded according to schedule. During the first half of 1968, computer programs for card-to-tape operations were tested and most tabulation programs were set up. It is expected that the first results from the 1966 census of retail outlets will be released by July 1968 and that subsequent reports covering both retail and service businesses will be released during the remaining part of 1968.

Difficulties in publishing wholesale trade data caused a great deal of concern during the past year. It was necessary to postpone publishing the 1963, 1964 and 1965 annual wholesale trade data and to shift additional resources to process and complete the 1966 Census of Wholesale Trade by the end of 1968. When the 1966 Census is completed, efforts will be made to complete the 1963, 1964 and 1965 wholesale trade data. These data will be published in a special reference paper which is expected to be available during the first half of 1969. Because of the reallocation of some divisional staff, it was necessary to cancel the annual 1967 Wholesale Trade survey. It is hoped that this survey will be re-instituted for 1968.

The year now ended saw a rapid growth in the rate of activity in the current retail statistics program. With the completion of large-scale revisions necessary to transpose the current monthly series to a 1961 Census base, a special intercensal report was produced for the period 1961-1964 and preliminary revised data for 1965-66 were published in the January 1967 issue of the *Retail Trade* report. Later in the year, action was taken to reinstate the annual retail trade publication series, and the first such report since 1960--embodying final birth-death adjustments--was

published for the year 1965. As the year drew to a close, plans were being formulated for the publication of a similar report for 1966.

There were other equally important developments during the year in connection with the retail trade series, aimed primarily at effecting an improvement in timeliness of the published report. Possibly the most significant activity was assessing the possibility of computerizing the monthly retail trade series in order to produce early estimates. In co-operation with the Information Division, another development was the publication of a retail trade digest, entitled *How's Business?*, which is being mailed each month to every firm in the retail trade sample, in an effort to increase interest in the uses of retail trade statistics and to encourage the earlier mailing of monthly reports. The reaction from respondents has been highly favourable as evidenced by the heightened interest shown by these businesses. In addition, the production time for the monthly retail trade publication was substantially reduced and a further saving in time was realized with the earlier release of summary data on retail sales in the *DBS Daily Bulletin*.

In collaboration with the Sampling and Survey Research Staff, work continued on the planning and design of a new retail trade sample which is scheduled for implementation by January 1970. Various tests are presently being carried out to determine the type of sample which will yield optimum results in terms of sample size, quality of results and cost. The results of one test in the Province of Prince Edward Island are now being analyzed and further tests on a national scale will be carried out within the next year.

Although much of the year's effort was expended on the retail trade survey, activities continued apace in other fields as well. Following a series of discussions with interested business users, agreement was reached on a major conceptual change in the department store universe and a radically modified definition was implemented at the outset of 1968. Among the surveys affected by this change, in addition to the monthly *Retail Trade* report, were the weekly and monthly *Department Store Sales by Regions* percentage change estimates and the monthly publication *Department Store Sales and Stocks*.

A new survey of voluntary group stores in the grocery and combination trade, covering the 1963-65 period, was released during the year, and a companion study on voluntary group stores in the non-food trades was being readied for publication. Other annual reports in the continuing retail statistics program included *Shopping Centres in Canada*, *Vending Machine Operators* and *Retail Chain Stores*. In all

cases, these reports were subjected to a thorough examination prior to printing and changes were effected in format and tabular presentation, in order to increase their usefulness to business, government and other users of the data. In addition, the standard monthly and annual statistical series on chain store sales and stocks were maintained and published at appropriate intervals throughout the year.

Other developments of note included the completion and publication of the census monograph *Trends in Canadian Marketing* and the preparation of textual and tabular materials on merchandising for publication in the *Canada Year Book*, the *United Nations Statistical Handbook*, and other related publications.

During the past year, a survey of "direct selling" in Canada was developed. The data collected will cover 1966 and 1967 and will likely be published by the end of 1968. The results of this survey will indicate the extent to which goods are being purchased by household consumers through other than retail outlets.

One area of major interest to government and outside users (businessmen and the general public alike) is the publication of consumer credit statistics. A major effort is now under way to improve the quality and timeliness of the monthly reports. Discussions are being held with other divisions, government departments and agencies as well as with representatives of the Federated Council of Sales Finance Companies to assess the present program of consumer credit statistics and to recommend various steps which will improve the quality of the published data.

The past year saw considerable time devoted to discussions with the Construction Machinery and Equipment Distributors Association, as well as with firms in the industry and interested government departments, in order to devise a sales survey covering about 50 different machines and types of equipment handled by firms in this business. This is essentially a commodity survey, but is being carried out on an establishment basis with an effort being made to get information on construction machinery and equipment sales by all businesses, not only those primarily engaged in the activity. Although present plans call for this survey to be undertaken biennially, it may in future be carried out as an annual survey if sufficient resources become available.

Another major new survey undertaken during the current year was the Destination of Manufacturers' Shipments for 1967. Several meetings were held with various provinces in the development of this survey and there was

unanimous agreement that the results would be valuable to each province. This survey will measure, in value terms, by industry, the flow of merchandise from manufacturing plants to each province and region of Canada. It is expected that a report on this survey will be available approximately mid-1969. In addition, plans are now being formulated to carry out a similar survey at the wholesaling level for 1968. This survey will complement the Destination of Manufacturers' Shipments survey mentioned above.

The country grain elevator survey has traditionally been carried out every five years in conjunction with the Census. Formerly classified to the wholesale trade sector, it was included in such reports up until 1961. Although country elevators were reclassified to transportation in 1961, they have continued to be surveyed by the Merchandising and Services Division because of their deep involvement in trade through the sales of farm supplies. Consequently, a separate publication will be released in 1968 to cover operations of country elevators during the crop year August 1, 1966, to July 31, 1967.

During the past year, further study was made of the possibility of using National Revenue tax returns for some of the Division's statistical programs. The primary purpose for using tax returns would be to minimize the requirements on business firms to supply data to the Dominion Bureau of Statistics, as well as to achieve some cost savings in carrying out these surveys by DBS.

Studies have been initiated to determine the best approach to produce more current estimates of consumer expenditures in the service areas. At the present time, a number of significant service trades are surveyed annually; in addition, there is a monthly sample survey of restaurants. However, prior to expanding the coverage of the service trades, a significant amount of exploratory work must be carried out. Problems of classification, conceptual difficulties and appropriate sampling techniques to be used must first be resolved.

During the past year, plans were made to improve and increase the coverage of the monthly survey of wholesale merchants. A new sample was drawn and should become operative within the next few months. This new sample will enable the Division to publish sales estimates for 22 kinds of business rather than the present 18. Studies will be initiated shortly to determine the feasibility of producing inventory estimates for selected kinds of wholesale merchants from the new sample.

Tabulation of data for the 1966 survey of operating results of independent and chain food stores has commenced and the manuscripts

will be ready in May 1968. It is interesting to note that, during the year, operating results were published for 43 retail trades, 27 of which had not been surveyed for this purpose previously. Again, because of staff reallocations, it was necessary to cancel a number of operating results surveys for 1967 and 1968.

Prices Division

The function of the Division is to collect, compile and publish data on prices and consumer expenditure. To achieve this objective the Division is subdivided into - Retail Prices and Living Costs, Industrial Prices and Central Research. In the first group are included the measurements of retail price movements and price differentials as they relate to changes and differences in the costs of living and real incomes of population groups within Canada, and between Canada and other countries. Included also are family budget surveys and studies, securing and analysing cross-sectional data on family expenditures and family attributes. Industrial Prices, on the other hand, embrace measurements of price movements and differentials in the production and distribution of commodities and services, in which the primary focus is on prices of the outputs and inputs of individual industries and groups of industries within the Standard Industrial Classification. The Central Research group co-ordinates and integrates research and analysis in prices and provides a small nucleus of specialists in methodology.

The regular monthly issues of *Prices and Price Indexes*, which include all price statistics published by the Division, and the earlier released monthly issues of *Price Movements* in which selected sensitive price indexes are first published, were continued in 1967-68. Publications of a non-continuous nature are described in the following reports for the various sections of the Division. The general plan for an accelerated program for the improvement of price statistics which was approved at an interdepartmental conference of users held during the latter part of last year, and noted in the 1966-67 annual report, had to be largely postponed because of insufficient resources although some additional staff was acquired through a reallocation of Branch personnel. The plan as such still remains the program of the Prices Division but the achievement of the outlined objectives will be spread over a long period.

Although staff vacancies severely hindered implementation of plans for broadening the scope and improving the quality of published statistics in the Retail Prices and Living Costs area, some initial steps towards achieving the goals set were taken in the fiscal year 1967-68. The nucleus of a Comparative

Living Costs Section was established to provide a focal point for the consolidation and development of statistics for measuring place-to-place price and living cost comparability within Canada. A detailed exploratory study of retail price differentials among seven large Canadian urban centres neared completion by the end of the fiscal year. In connection with a review of the system of allowances payable to federal public servants stationed in remote areas, a program of experimental studies to measure comparative living cost conditions was initiated. This involved visits for the collection of data by divisional staff members to several Northern Manitoba communities including Thompson, Lynn Lake and Churchill as well as to Baker Lake, Rankin Inlet and Eskimo Point in the District of Keewatin.

The Retail Prices Section's activities during the 1967-68 fiscal year were mainly devoted to the solution of current problems arising in the production and publication of the Consumer Price Index. The reference base of the national and regional cities consumer price indexes is to be updated from 1949 to 1961 by the middle of 1968 in conformity with many other DBS series and work towards this end was well advanced by the end of the year under review. Internal organizational changes were initiated to facilitate more intensive screening of incoming price quotations and to extend the application of mechanical data processing, especially as related to the large volume of food prices received monthly. A program of regular head office workshop training sessions for field pricing staffs was started early in 1968 to effect closer technical liaison between the data collection and the index compilation functions.

Throughout the year activities in the Family Expenditure Section centred around analysis and publication of results from the 1964 survey, and planning for a similar survey in 1968. Following release of some basic results of the 1964 survey in May 1967, a selection of tables pertaining to this survey was published along with the feature article "Surveys of Family Expenditure" in the *Canadian Statistical Review* of June 1967.

In the first months of 1968 a recall survey of the complete family budget, referring to the calendar year 1967, was carried out in eleven large urban centres across the country. This survey, identical in locale, size and scope to that undertaken to derive 1964 expenditure patterns, referred to families and unattached individuals without restrictions of income or family size. Detailed tabulations of expenditures are anticipated from about 2,000 useable family records classified separately by sixteen family characteristics, including city, family income, family type and age of

head. Utilization of existing computer programs is expected to considerably improve timeliness in producing results.

To meet the requirements of the Canadian Government's foreign service allowance system, the International Prices Section analysed detailed surveys of comparative living cost conditions at over forty foreign cities to determine appropriate levels of allowance for public servants stationed abroad. In addition, the results of numerous previous comparative living cost studies for other locations were reviewed and updated in the light of current price and exchange rate situations, including the devaluation of sterling in November 1967. Officers of the Section visited various European cities in relation to this work as well as in connection with surveys of comparative prices and accommodation costs of military personnel serving at various bases in Western Europe.

In the Industrial Prices Section the particular emphasis given to the further development of price statistics covering capital expenditures resulted in a new publication *Price Indexes of Electric Utility Construction* which was released in July 1967. The publication included base weighted annual price indexes from 1956 to 1965, with 1961=100, for construction of transmission lines, distribution systems and switching stations. The indexes are based on labour, material and capital inputs into these facilities and marks completion of the first stage of development of price indexes covering all electric utility construction. Work is proceeding on other electric utility facilities, including steam and hydro generating stations.

During 1967, the price samples of both the residential and non-residential building materials indexes were overhauled and the revised indexes for the period January 1966 forward were published in the May 1967 edition of *Prices and Price Indexes*. The quality of price information now embodied in the indexes is improved by making extensive use of price data collected for the industrial selling price indexes. In addition, in the case of residential building materials index only, the commodities included in the index were updated in consultation with industry specialists to take account of changes in the materials used in house-building. Also, in the December 1967 issue of *Prices and Price Indexes*, revised and updated Highway Construction Price Indexes were published for seven provinces, including a combined provincial index; the indexes, as before, contain prices of the principal types of construction work undertaken in highway building. The updating of the series which were previously available only to 1963, revealed sharp price increases in the years 1965 and 1966 in this area of construction activity. The major improvements in the revised series stem from

more highly developed assessments of the reliability of price data used, and a refinement of the classification system to obtain a greater degree of homogeneity in the groupings of prices.

During the latter part of 1967 an intensive drive was launched to upgrade the quality of price data relating to producer durable equipment, with the dual purpose of ultimately publishing indexes of prices paid by purchasing industries for machinery and equipment, and of strengthening the selling price indexes of domestic producers of machinery. The work during 1967 consisted principally of planning, including field trips to major purchasers of capital equipment to obtain their assistance in improving and updating the items to be included in the above indexes.

Work continued on the revision of the Industrial Selling Price Indexes throughout 1967, and it is planned to publish the revised series in 1968. The revision includes an updating of the weighting system from 1953 to 1961, a changed time base from 1956 to 1961=100 and the introduction of the 1960 Standard Industrial Classification to replace the existing 1948 SIC and to permit comparability with other major economic statistical series. The revised series will initially cover, as a minimum, the period 1961 forward.

Planning for the conversion of the calculation of industrial prices from a manual to a computer operation commenced in 1967. It is not anticipated that the production of electronically processed price indexes will take place prior to 1970 but subsequent to that time benefits should be apparent in terms of improved timeliness of data release, an increased flow of published indexes and the availability of analytical reports which cannot be prepared by manual methods under present resource conditions.

Transportation and Public Utilities Division

The Transportation and Public Utilities Division conducts a comprehensive statistical program covering transportation and public utilities in Canada. The Division consists of three sections: the Aviation Statistics Centre, the Transportation Section and the Public Utilities Section. The first mentioned deals exclusively with aviation statistics including the work formerly done by the Transportation Section in this field, but also embracing the statistical work of the Department of Transport and the Air Transport Board. Transportation covers rail, road and water transport, while the Public Utilities Section covers radio and television broadcasting stations, telephone systems, telegraph and cable companies and community antenna (T.V.) systems.

In connection with rail transport, a number of developments delayed the production of a computer tape designed to enable Canadian railways to convert commodity statistics from the United States Standard Transportation Commodity Classification and report in terms of the Bureau's Standard Commodity Classification. The need to incorporate changes in the American classification, to maintain continuity, to enable users to bridge the break in the series, and to improve timeliness and quality, necessitated further detailed studies and reconsideration of the contents and format of the publications involved. The production of the magnetic tape and print-outs are now complete and reporting on the revised basis is to begin in 1968. By the end of the year, the volume of freight movements, monthly, will be available for publication on the basis of the present as well as the revised format. To improve the usefulness of the information for analytical purposes, arrangements have been made to drop the *Weekly Carloadings* publication as of January 1969, and produce a timely monthly report containing both the number of cars loaded and the tonnage carried for approximately seventy-five commodities as opposed to the present forty-eight. To continue to make available a timely economic indicator, it is intended to publish in the *DBS Daily Bulletin*, weekly carloadings in total only, beginning in 1969. The quarterly and annual *Railway Freight Traffic* publications will contain approximately 320 commodities as opposed to the present 265.

To further improve timeliness and for other reasons, it has been decided to delete individual railway company data from the monthly and quarterly publications and produce in the annual publications the details of the nine largest companies only, as a relatively few railways account for more than ninety per cent of the industry in terms of revenue, tons carried and ton miles.

In the water transport area, *Commodity Flow Charts* designated as Part VI of the annual *Shipping Report*, was released for the first time in the autumn of 1967. This publication shows in graphic form, foreign and coastwise movements of the eight most significant bulk commodities in Canadian waterborne commerce--wheat, other grain, pulpwood, newsprint, gypsum, iron ore, bituminous coal and fuel oil. The prime purpose of these charts is to depict the direction and density of such traffic on the Great Lakes, the St. Lawrence River and Atlantic coast.

A study of the feasibility of computerizing the shipping statistics has been completed and arrangements are being made to effect the conversion beginning with the January 1968 source documents. It is expected that this innovation will improve timeliness and reduce the amount of manual work required to produce the publication.

In co-operation with the National Harbours Board, a study is underway to review the extent of duplication in the collection and production of shipping statistics, the possibility of eliminating any such duplication and the feasibility of closer co-operation in areas of joint interest.

In the field of road transport, the Motor Transport Traffic Survey, initiated on a national scale in 1957, was discontinued at the end of 1967 for a number of reasons. A review of the methodology indicated that a number of important changes in the trucking industry in the last few years had, in effect, made the sample design obsolete. Among these changes were quarterly motor vehicle licences, reciprocity agreements between provinces and states, the growth of piggyback and containerization. Another important factor was the increasing emphasis by users on the need for more commodity information particularly on an origin and designation basis.

As the survey was originally undertaken to provide broad national trends relative to the size and make-up of the industry and to indicate its importance and competitive position, the sample was not designed to obtain detailed commodity information and indeed could not be adapted for this purpose.

Research is underway, however, to develop a new approach to obtain traffic statistics for this important industry, and it is hoped to devise a new survey for initiation in 1969.

During the past year, the Aviation Statistics Centre and the United States Civil Aeronautics Board, in close consultation, modified and redesigned their respective programs for the collection of air passenger origin and destination statistics in order that, beginning with 1968 data, the statistics separately produced will be compatible for the first time. The surveys are designed to follow passengers on scheduled airline services from the point at which they start their air journey to the farthest point, and to record their return journey. Use of a revised reporting form and new instructions in line with the agreed-upon modifications began on the first of January 1968. The new Canadian program includes intraline and stopover detail in addition to interline connecting points and carrier identification. Work has begun on the task of redesigning the complex system of computer programs necessary to produce material for the quarterly exchange of transborder origin and destination data with the United States; for a transborder origin and destination publication for release to the general public which will combine Canadian and United States data; and for the annual report on domestic origin and destination statistics and additional detailed routing information which the

Centre produces for the Air Transport Committee of the Canadian Transport Commission.

The airport and air route surveys have been expanded to include a number of municipal airports across Canada. This project was designed to meet the needs of the Department of Transport for information on aircraft activity for analysis of terminal facility requirements and other airport assistance programs. In order to bring reporting within the capability of limited staff at these airports, a simplified reporting form, designed to cover a week's activity, was devised and introduced. Through the use of more sophisticated computer programs, the Centre has effected improvements in timeliness and quality of the statistics concerning airports with air traffic control towers. Programs to facilitate analysis of data have been inaugurated, and peak day information is now available for small airports. Over the past year, six airports have acquired control towers and are now reporting to the "Airports with Tower" survey; 39 more airports are included in the "Airports without Towers" survey compared with the 1966-67 fiscal year.

An important first step in the co-ordination of the several Station Activity and Traffic Flow surveys was taken early this year when the Centre arranged for the provision by Air Canada of as much detail on domestic flights as it is now reporting for international flights at Canadian gateway points. Reports will be in the form of magnetic tape for use directly as computer input. With the implementation of this agreement, the Centre expects to be able to effect considerable improvement in cargo estimates which have previously been based on incomplete information. More precise station activity data will thus be provided for certain airports. It is hoped that similar reporting modifications can be developed for the other contributing carriers.

The programming for the computerization of the *Civil Aviation* report is well underway. Parallel computer and manual production is expected to begin shortly. With electronic data processing and an attempt to obtain returns earlier from reporting carriers, the timeliness of the publication can be expected to show considerable improvement.

Negotiations have been carried out throughout the year to complete plans for the amalgamation of the Statistics Section of the Air Transport Committee, Canadian Transport Commission, with the Aviation Statistics Centre. Formal transfer is expected to take place on April 1, 1968.

In the Public Utilities Section the joint DBS-Canadian Radio-Television Commission (formerly the Board of Broadcast Governors) reporting schedules, at the request of the Commission, have been revised and expanded to obtain additional information deemed necessary to enable it to carry out its increased responsibilities as defined by the new Broadcasting Act proclaimed early in 1968. These reporting schedules have also been revised to conform with a uniform classification of accounts produced and distributed by the Association of Canadian Broadcasters and endorsed by the Commission.

A glossary of technical terms for the Broadcasting Industry has been prepared and is expected to be published shortly.

During the year, coverage of the communications industry was extended by the initiation of a new survey of operating and financial statistics of community antennae television systems. This new survey is also designed to obtain the statistical information required by the Telecommunications Branch, Department of Transport, to carry out its licensing and other responsibilities.

SOCIO-ECONOMIC STATISTICS BRANCH

The Socio-Economic Statistics Branch is responsible for a wide range of demographic, sociological and economic statistics which deal predominantly with information about persons and families derived from household and institutional sources. They include the following: censuses of population, housing and agriculture; statistics on elementary, secondary, higher and adult education, vocational training and school finance; agriculture statistics; health, vital and judicial statistics; family income, assets and liability statistics. The Branch is also responsible for the field operations of DBS including the labour force sur-

vey, and eight Regional Offices, as well as for provincial liaison and consultative services.

The organization of the Branch comprises the following units: a small Branch headquarters staff; Agriculture Division; Census Division; Consumer Finance Research; Education Division; Health and Welfare Division; Provincial Liaison and Consultative Services; and the Special Surveys Division. The work of these elements of the Branch is described in the following paragraphs.

Agriculture Division

Besides maintaining a flow of data related to agriculture, the Division is increasingly active in devising improved data collection procedures to meet the rapid changes in the structure of agriculture and allied industries and to fulfil new data requirement. Increased specialization in agriculture is greatly magnifying differences in resources and in the allocation of resources between farms. Thus, sampling problems become more difficult and sophisticated sampling techniques are being gradually introduced to strengthen the data collection system. New data requirements result from the need to measure changes in resource allocations and the effect on incomes of farm people.

The Crops Section publishes a continuous and comprehensive flow of timely data and market information on field and horticultural crops in Canada. At the farm level much data is collected by means of mailed questionnaire enquiries of a sample of volunteer crop correspondents, seeking information on such topics as growing conditions, forecasts of acreage to be planted, probable yields and farm stocks and quantities of grain fed on farms. Although published reports usually refer to provincial totals only, the data for many items are tabulated by smaller geographical areas and made available to provincial authorities.

To integrate material from farm surveys with other available detail on grains and oilseeds, two comprehensive reports, the *Wheat Review* and the *Coarse Grains Quarterly*, are published. These publications collate and analyse national and international data and policy changes of importance to the production and marketing of the major commercial grain and oilseed crops. Detailed data on the movement of Canadian commercial grains and oilseeds are published in the *Grain Statistics Weekly*. Historical data are made available for reference purposes in a series of handbooks and in the annual *Grain Trade of Canada*.

Following the release of 1966 Census data, appropriate revisions in the annual acreage and production series were made for field crops for 1966 and the period 1962-65 inclusive. These revisions have been published. A monthly survey of the seed purchases and shipments by seed dealers and processors was instituted in response to request from the trade and producers.

An experimental enumerated random sample segment survey was instituted in twelve counties in southwestern Ontario. This program was carried through in co-operation with other sections in the Division and the Ontario Department of Agriculture and Food. Estimates of crop acreages and yields independent of the mail questionnaire survey were generated. This was designed, in part, to explore the nature

and importance of non-response bias in the voluntary response mail questionnaire approach. It also provides an opportunity to obtain unbiased quantitative response information on various farm practices. With the increased interest in resource allocation and economic efficiency in Canada, emphasis will be placed on the development of vehicles to measure changes in these areas.

The British Columbia experimental objective apple crop survey, based on fruit counts, was carried out for the second time in 1967. The Ontario winter wheat objective crop estimating work was also undertaken for the entire twelve counties included in the segment survey. The Saskatchewan fertilizer use survey was continued for the second year. A very considerable interest in this program was evident on the part of the trade, farmers and government officials.

The regular operating program of the Livestock and Animal Products Section included the monthly reports on the output of dairy factory products, fluid milk sales, estimates of production and farm value of milk and eggs, and on stocks of the principal food commodities held in storage; quarterly reports on the number of pigs on farms and sows to farrow forecasts; semi-annual estimates of other livestock and poultry on farms, annual estimates of meat and wool production and disappearance. Annual reports on dairy, livestock, poultry and eggs, and also on fur farm statistics, cover production, trade, consumption and other related data relevant to these areas of activity.

In addition to the regular operating program, efforts were made to apply probability sampling methods to livestock and poultry estimating procedures. Results obtained from two pilot projects undertaken suggest a broad area for application of these techniques into routine operational procedures.

The first study undertaken to generate livestock and poultry estimates by probability sampling methods was an enumerative type survey. The sample frame consisted of selected counties in southwestern Ontario, from which representative segments were randomly selected. Provision was made to obtain data on livestock and poultry numbers from open and closed segments which in turn permitted estimates to be generated within known confidence limits, by the open, closed and weighted segment methods. Tentative results obtained from this study show this technique to be highly satisfactory for estimating cattle and hog numbers, but not as successful for estimating sheep and poultry numbers. Further exploratory work in this method is planned for the summer of 1968.

A pilot project to estimate numbers of cattle on feed in Alberta was undertaken in mid-January of 1968. A secondary objective of

this survey was to study the implications and feasibility of applying replicated samples, drawn from a list sample frame, to livestock estimating procedures.

The vehicle used for collecting data for the cattle on feed survey was the mail questionnaire. Six independent samples of Alberta farmers with cattle, stratified geographically and by size of enterprise, were randomly selected from the 1966 Census lists which constituted the sample frame. Estimates generated by the six independent samples were within acceptable confidence limits and further developmental work is planned in the coming year with a view to applying the technique to other types of livestock and animal products.

A sample frame and selection of a sample has been completed to include Newfoundland in the monthly and annual estimates of egg and poultry production. It is expected that plans developed to date will be implemented early in 1968-69.

The Farm Finance Section conducted its regular semi-annual farm surveys of crop acreages, livestock numbers and disposition, farm woodlot production and farm wages. Estimates were prepared and published for indexes of farm prices and production, farm cash receipts and net income from farming operations, farm wage rates and farm capital. Estimates were also prepared and made available on request for the value of total agricultural production and value per acre of farm land. This Section was also responsible for publishing in 1967 a revised *Handbook of Agricultural Statistics* dealing with farm income and expenditures for the years 1926 to 1965. The revisions contained in this Handbook extended back as far as 1940 and were based on the most up-to-date information from private and government sources, including the Census of Agriculture and the 1958 Survey of Farm Expenditure and Income. These estimates also reflected changes in methods of calculation which have been developed in recent years.

A revised index of agricultural production containing all of the revised production data used in the revised income estimates was published in the spring of 1967. The preparation of measurements of physical inputs for the agricultural industry was continued during the summer. The rebasing of the DBS index of farm prices of agricultural products was started in the fall of 1967 and is expected to be completed during 1968. The Farm Wage Rate Survey, which up to the end of 1967 had been on a thrice yearly basis, was converted to a monthly basis. The acquisition of an additional professional to the staff permitted the launching of a program of research into methods, sources and concepts to be used in the improvement of estimates of farm product prices at the farm level.

The Special Projects and Research Section was involved in a project in the production of a master tape file for computer processing of farm mailing lists, which was completed in October of 1967. The master tape contains a data record for each farm enumerated in the 1966 Census of Agriculture, with the exception of farms located on Indian reserves. Information in the data record was obtained from the Census of Agriculture questionnaire. It consists of the farm identification codes, name and post office address of the farm operator, crop acreages, livestock and poultry numbers, and other selected characteristics of the farm. Data pertaining to most of the farm characteristics are coded for identification according to classifications used in the Census of Agriculture publications. The master tape file is intended to serve several purposes. Its main function is to provide information required for addressing the questionnaires used in the June and December Surveys of Crops and Livestock and a number of monthly, quarterly and seasonal surveys conducted by the Agriculture Division. In addition to the production of survey mailing lists, the master tape file can be used as a source of selected lists and classifications of farms for special surveys, and for research projects related to sampling and survey methods.

Census Division

During the year, the emphasis in the work of the Census Division began to shift from the 1966 Census of Population, Housing and Agriculture to planning for the 1971 Census.

Research projects designed to improve coverage, quality and timeliness of census data were initiated. During September 1967, a self-enumeration census data collection method using mail-out/mail-back procedures was tested in London, Ontario as a possible technique for use in the 1971 Census of Canada. For the test, approximately 62,500 questionnaires were mailed to London householders who were requested to complete the questionnaire and return it by mail. Slightly over 53,200 (85 per cent) were completed and returned. Questionnaires returned were edited and those found incomplete or inconsistent were followed up through a telephone interview. Those households failing to return their questionnaires were visited and interviewed by an enumerator to obtain the required information. The London Census Test indicated a need for further testing of questionnaire content and design, field and office operations as well as small urban and rural population-agriculture procedures. To meet this need, the testing program being developed for 1968-69 will include tests in Toronto, Verdun and four rural areas in the provinces of Nova Scotia, Quebec, Ontario and Alberta.

The processing and production of reports on the 1966 Census continued throughout the

year. Large quantities of computer-produced tabulations were received and examined; seventeen reports on population, one on housing and eleven on agriculture were published, and work was begun on the outstanding volumes and on analytical commentaries. As part of an operation to rationalize the control and storage of census material, some five million population documents from the 1966 Census and over half a million documents from the 1951 Census of Agriculture were microfilmed. The coincidence during the year of this regular work with the complex task of investigating new methods for the 1971 Census placed an exceptionally heavy burden on the staff connected with these aspects of the Division's activities.

The first three of a series of 1961 Census monographs appeared. The stated purpose of the 1961 Census monograph program is to provide a broad analysis of social and economic phenomena in Canada. Although the monographs concentrate on the results of the 1961 Census, they are supplemented by data from previous censuses and by statistical material from other sources. The first three concern urban development, the labour force, and trends in merchandising; five more, on a variety of subjects which include fertility and migration, were in the course of preparation. Further, the Division issued 21 Technical Memoranda and Papers, including a bibliography of Canadian demography, reports on aspects of 1961 and 1966 Census methodology such as publicity, comments on several demographic subjects such as the data on fertility from the 1961 Census, and descriptions of the current census test program; unlike the monographs, they are not on sale, but are generally available on request.

The regular series of quarterly and annual population estimates and of Canadian Citizenship were prepared for publication. The inter-censal estimates previously made for 1962-65 were revised in the light of 1966 Census results, and a special bulletin entitled *Revised Annual Estimates of Population for Canada and the Provinces, 1961-66* was completed. A new program to develop population projections for Canada was started in December.

Two innovations during the year may be mentioned. A Census Data (Use and Development) Section was set up, with the aim of improving communications and co-operation between users and producers of census information. The Geography Section collaborated with the Sampling and Survey Research Division in the initial design of a small area information system, by which census data in urban areas can ultimately be stored on the basis of unique grid co-ordinates and retrieved for any small arbitrarily defined area.

During 1967-68, the Census Division co-operated with the Central Classification Research and Development Staff of DBS and the

Occupational Research Division of the Department of Manpower and Immigration in the development of a standard Canadian Classification and Dictionary of Occupations (CCDO). The CCDO will reflect the latest changes in the occupational structure of Canada and will be used by the Division to classify occupational responses in the 1971 Census. Since it will be used by all government departments, the CCDO will permit interdepartmental comparisons of occupational data collected from a variety of sources.

Numerous routine activities continued. The number of requests for evidence of age by reference to early census and national registration records grew from 54,000 last year to 57,000, and at one period a night shift was employed to avoid delay in handling. Other requests for all kinds of census data also increased in number, being received from provincial governments, universities, commercial concerns and individuals all over Canada. Co-operation was given to the Economic Council of Canada in preparing its Staff Study number 19 on population and labour force growth. Assistance was provided in the planning of surveys of housing in the Yukon and of manpower in the Northwest Territories; to a committee on the relocation of settlements in Newfoundland; and to interdepartmental committees in designing a program to outline census statistical areas on about 2,000 topographical maps. A committee was created to re-evaluate concepts applicable to Census Metropolitan Areas, and methods of producing statistical maps by computer were investigated.

Various members of the professional staff represented the Division and the Bureau at a number of international meetings held throughout the year including the American Statistical Association, the Conference of European Statisticians and the Population Association of America. Numerous meetings were also held with various user groups to discuss plans for the 1971 Census, particularly on subjects requiring early attention such as the all-important matter of questionnaire content. The groups involved represented many diverse interests - governmental (federal, provincial and municipal), professional and academic associations, as well as planning boards.

Consumer Finance Research

During the year under review, the preliminary results of the 1966 Survey of Consumer Finances, which collected income data for the year 1965, were released. This was the first DBS income survey to include farm families as well as non-farm families and thus the first survey to provide estimates of the income distribution of all Canadian family units. The statistical report of the results is nearly completed and will be released in the next

fiscal year under the title of *Distribution of Incomes in Canada by Size, 1965*. As well as statistics for all families, the report will contain data on non-farm family income to provide comparability with statistics in earlier reports. The report will provide statistics on the income distribution of persons 14 years of age and over as well as families, similar in scope to the statistics published in *Distribution of Non-Farm Incomes in Canada by Size, 1967*.

Planning of a new income survey to be undertaken in April 1968, for 1967 income data, was completed. This survey will have several new features. As in the previous survey farm families will again be included but the sample size is being expanded from 12,000 to 30,000 households, the largest such survey ever undertaken by DBS. It is hoped that this will permit better regional analysis of income characteristics. In addition to income, the survey will collect information on economic and demographic characteristics of income recipients such as age, labour force status, occupation, industry, immigrant status, education, work history and duration of employment. Statistics will be published on family and individual incomes. For four-fifths of the sample, statistics will also be collected on household facilities and equipment - age and size of dwelling, car ownership, and ownership of appliances. For the first time since the 1961 Census it will be possible to analyse housing characteristics by family income level and family characteristics. The results of these surveys will be released in a series of reports.

Work is nearly completed on a special report on income trends in Canada for selected years between 1951 and 1965. In addition to statistics on the income distribution expressed in current dollars, the report will contain income distributions by selected family and individual characteristics in 1961 constant dollars. The characteristics of family units by quintiles will also be published. The report is expected to be released in mid-1968 and, in future, constant dollar and quintile series will probably be incorporated in the main publications of survey statistics.

Revisions of the Census monograph *Incomes of Canadians* which analyzes income data collected on the 1961 Census of Canada and on the Surveys of Consumer Finances were completed. The publication will be released shortly.

Work was continued on the development of annual estimates of aggregate income by counties and census divisions. A series covering the years 1961 to 1966 should be ready in the next fiscal year. A special reference paper will be issued when the estimates are completed. It is intended to eventually publish the estimates on an annual basis.

The staff collaborated with the Department of National Revenue, other DBS staffs and other departments on the planning of improvements in taxation statistics to meet needs for current data on municipal income statistics and migration statistics between localities and provinces.

In addition to the above projects, work was continued on a number of methodological and research studies such as evaluations of survey and census data, and analysis of the characteristics of the farm population by farm characteristics. The staff participated in the planning of 1967 and 1968 Census tests and in the planning of evaluation studies.

The Co-ordinator of the staff was loaned on a part-time basis to the Economic Council of Canada to assist in the preparation of the Council's 1968 Annual Review. The Co-ordinator also represented DBS in Geneva at a working meeting of the Conference of European Statisticians called to discuss development of household income, expenditures and financial statistics as complementary systems in the National Accounts framework. In addition, the staff participated in a number of DBS internal committees, interdepartmental committees and intergovernmental committees on subjects such as research needs, minimum budgets, economic statistics programs, and census planning.

Education Division

Education is in a constant state of change and demands for information change more or less rapidly.

It is of considerable importance to educationists and to authorities concerned with the labour market to have information on students dropping out of school, in what numbers they are leaving school, the extent of their education, and the occupations they are entering. Four public school systems (including Indian Affairs and Northern Administration) are now collecting reports on individual pupils leaving school for processing by the Education Division. This method has been adopted experimentally for secondary schools in a fifth provincial system and a sixth province is using the system on its own.

In the fall of 1967 the Elementary-Secondary Section revised its questionnaire on teachers to include such items as year when university degrees obtained, patterns of mobility and size of instructional unit.

In co-operation with two universities, the collection of statistics on students taking extension courses, and in connection with statistics on enrolments in summer courses for teachers, resulted in improved reporting to DBS.

During the year, the Vocational Training Section assumed federal responsibility for the collection of data on public vocational education at all levels. The consequent reorganization involved continual negotiations throughout the last half of the year with provincial departments of education, soliciting their co-operation in the collection of the required data. Forms were redesigned and new arrangements made for collection. Despite staff shortages some progress was made in updating publications.

A brochure was prepared listing the courses offered by over one hundred technical and vocational institutions. This has proved very popular and useful to vocational counsellors and to prospective students. Close collaboration with the Canadian Nurses' Association resulted in the introduction of a regular survey of salaries and qualifications of faculty members in training schools for nurses. During the year, work on a special survey of *Organized Training in Four Industry Groups, 1965* was completed and the results published.

Canadian university students who are interested in pursuing graduate studies are very much interested in what bursaries are available to assist them in furthering their studies. To meet this need the Higher Education Section, by means of a survey of all known sources, prepared a list of over 1,500 *Awards for Graduate Study* available to Canadian students. This publication dated 1967 was published early in the fiscal year.

The Division maintained its regular publications on adult education and libraries, and released a total of twenty-five publications covering all areas of education.

There is increasing interest in the education of exceptional children - those who differ so far from the normal as to require special educational facilities. In recognition of this growing interest and of the expanding facilities being used in education of such children, the Education Division surveyed all special schools, classes and teachers, both public and private. Results were published during the year under the title of *Statistics of Special Education for Exceptional Children*.

A survey of automated teaching and learning devices in communities of 40,000 and over was made, and another of teachers in teacher-training institutions was carried well on towards completion by the end of the period under review.

Within recent years the Education Division has been faced with a growing demand for forecasts particularly of enrolments, teachers and expenditures. These demands have come from the Economic Council of Canada, several

federal government departments, all the provincial governments, provincial economic councils, provincial commissions or boards for higher education, publishers, industry, business firms, market analysts, research students and international organizations. Some of these have been requests for specific forecasts, others of more general type.

Division staff worked with staff of the Economic Council of Canada in the preparation of education projection, which were released in the Economic Council Staff Study number 20, *Enrolment in Schools and Universities 1951-52 to 1975-76*. As a result of the work on projections, the Division was able to begin publication of an annual *Advance Statistics of Education* at the beginning of the school year giving estimates of schools, teachers, enrolment and finance for the year then beginning.

In the area of education finance statistics, special enquiries increased in both volume and complexity and material was prepared for the federal-provincial conference on the support of post-secondary education. Two special reports were prepared for UNESCO. In mid-year a new regular survey was begun on the budgeted education expenditures of federal government departments, agencies and corporations. The purpose of this survey is to ensure continuity and comparability of reporting and to provide for a reliable estimate of expenditures in the ensuing fiscal year.

Health and Welfare Division

This Division is responsible for the production of statistics on the state of health of the Canadian people, and on the enforcement of law and administration of justice in Canada. Four sections share the responsibility for producing statistics on health. The Vital Statistics Section is concerned with the events of birth and death, as well as with those of marriage and divorce. In particular, it carries out studies on natality, mortality, fertility and life expectancy. The Institutions Section is concerned with the services, facilities, staffing and finances of general and special hospitals and of mental and tuberculosis institutions. The Public Health Section is concerned with the individual conditions and the personal characteristics of patients in general and special hospitals and in tuberculosis institutions. It is also concerned with the incidence of a number of communicable diseases. The Mental Health Section, which was formed this year, is responsible for patient characteristics and patient movement as these relate to mental disorders and psychiatric facilities. The fifth section, the Judicial, is responsible for the production of criminal and judicial statistics based on information supplied to it by police departments,

courts, correctional institutions, the Penitentiary Service and the National Parole Board. The Division also conducts non-repetitive special investigations, e.g., medical and dental care.

Tabulations requested by research specialists, governmental, and other organizations in the field of mental health were many and varied. New, more useful tabulations organized in terms of type of psychiatric institution and giving detailed information concerning the aggregate days of care were prepared for publication in *Volume I - Institutional Admissions and Separations* and *Volume II - Patients in Institutions*. Work was begun on special reports dealing with expectation of admission to a psychiatric institution, retention ratios based on cohorts of individuals selected in terms of appropriate variables, and separation rates based on population at risk.

Many Private Hospital Schools for the Mentally Retarded were visited with the intention of bringing these institutions into the mental health reporting system. The program to bring Residential Treatment Centres for Emotionally Disturbed Children into the reporting system was continued. Also, initial planning was started for the inclusion of all psychiatric patients in general and allied hospitals (estimated at over 65,000 or almost 50 per cent of separations) not now covered by the reporting system.

New tabulations designed to explore relations between mental patients, physicians, and hospitals were introduced. Planning for future development, including coverage of virtually all inpatient facilities and improving the quality and timeliness of the data, continued to receive a great deal of attention during the year.

As in the past, the Division published information on the medical, social and other characteristics of patients confined to general and allied special hospitals, and tuberculosis sanatoria. The Division issued a fourth report (1964) on morbidity, in general and allied special hospitals, showing detailed diagnostic information for nine provinces. This work represents a significant addition to morbidity knowledge in Canada and constitutes the only available source of information in Canada for many conditions and diseases. Substantial information for disease research is also tabulated and stored in the divisional reference library to answer special requests for more detailed age-sex breakdowns than could be published. The Division also hopes to release, during the coming fiscal year, a publication dealing with surgical procedures carried out in the hospitals. In this area much valuable and currently unavailable information will soon become available for study

in conjunction with the incidence of disease and the classification and utilization of hospitals.

Besides the work on morbidity in general and special hospitals, the regular monthly and annual reports on the incidence of tuberculosis were published. An important innovation in the tuberculosis field is that, starting with 1966, information was also received on outpatient chemotherapy as well as inpatient treatment, making the compiled data much more comprehensive and useful in the study of this disease.

The Division issued weekly bulletins on the incidence of communicable diseases for the benefit of public health authorities and exchange of current information with the World Health Organization, Pan-American Sanitary Bureau and the United States Department of Health. The figures of weekly incidence were later compiled into an annual report for the year. Tabulations of certain venereal infections reported to the Division were forwarded to the Department of National Health and Welfare for inclusion in a special report.

Many special requests for morbidity information were answered. These came from federal and provincial government departments, from medical researchers, commercial concerns and individuals. The requests have varied in their nature. The information provided has ranged from data on hospital utilization to incidence of specific diseases and disabilities and an experimental study of the value of hospital records for selecting congenital defects.

The Division met its statutory obligations in the field of vital statistics by preparing and publishing the regular series of reports, and by supplying the provinces with basic tabulations for births, stillbirths, marriages and deaths, as required under Dominion-Provincial agreements.

More frequent this year than ever before have been requests for intensive investigations of the patterns of nuptiality and fertility. These latter requests have been occasioned by the recent drastic changes in the birth and marriage rates in recent years. New developments in hospital and medical care have added to the already considerable flow of demands for information on mortality due to particular causes. Most of these varied special requests required special calculations and compilations, as the information demanded was not available in any published form.

To meet these and a number of other demands at once, as well as at the same time satisfying special interest groups, several analytical studies have already been published,

and others are planned. These studies relate to cancer, accidents, heart disease, foetal and infant mortality, nuptiality, fertility, and life expectancy, and deal with the latest trends in these areas and seek to elucidate factors associated with the direction and magnitude of the trends. Besides a planned special life expectancy study, a series of annual life tables is being initiated, to serve as a general reference for those interested in survivorship, and for government and other bodies responsible for long-term projections and planning. These reports and studies have been supplemented by a series of technical reports which deal with methodological techniques of life-table construction, statistical measures of trends, and techniques for projections of births, marriages and deaths.

In order to meet the needs of subject-matter specialists and epidemiological researchers, and to accelerate the release of current data, a new annual report on mortality from detailed causes of death was initiated, and the release of 3 separate annual reports is planned, dealing with births, marriages and deaths, to replace the present combined report. Calculations on 15-year projections of births, marriages and deaths were initiated as the base for population projections. The Division also collaborated in methodological studies relating to inter-censal estimates of population.

Since 1945, the Division has been preparing alphabetic registers of births, marriages, and deaths on behalf of the provinces and the Family Allowances Administration. It would be agreeable if this task, which is not directly statistical in nature, could be carried out by some other body; negotiations to this end, and investigations into suitable alternative methods of supplying the listings, have been continuing.

Each year the Division provides the Vital Statistics Council for Canada with its secretariat service. In addition to work immediately associated with meetings of the Council or of its committees, the secretariat service is usually involved in the examination of a number of problems designated by the Council. Some of these problems relate to legal and administrative features of the vital statistics system, while others extend to the general sphere of social statistics. As an illustration, the secretariat made arrangements, on behalf of the Council, for a full investigation and redesigning of the present registration forms used by the provinces, involving collecting views, summarizing opinions, and circulating results to all Council members. One of the objectives of this investigation was further standardization of content, size and format of the re-

cords used by all the provinces, subject to local legal requirements where some variation is inevitable. Since the records serve both legal and statistical purposes, provision must be made for meeting both requirements. The anticipated benefits will be both administrative and statistical; there will be cost economies, a new convenience in processing, a new ease of record exchange, economies in storage of the forms, and other advantages for the provincial administrators. At the same time the statistical usefulness of the schedules will also have been thoroughly reviewed.

The Institutions Section's programs for the production of a comprehensive series of management and reference statistics on the activities of general and allied special hospitals, mental institutions and tuberculosis sanatoria has continued to be improved. Some important progress has been made in timeliness of publication for the eleven annual volumes and further improvements are planned in future years through extension of field edits, and other refinements. The Section has also received and answered many special requests from unpublished data in all three areas.

In co-operation with the Canadian Hospital Association and the Canadian Nursing Association, a salary survey of graduate nurses employed on a full-time basis in public general and allied special hospitals was undertaken for the first time in 1967. The survey response was excellent and the results were released in preliminary form in March 1968. A more detailed report is planned for later release. It is anticipated further surveys will be undertaken in co-operation with the above two agencies and other federal government departments on a regular basis.

The revisions to the Annual Return of Hospitals, Part I - Services and Facilities, and Part II - Finances, originally planned for introduction in 1968 have had to be deferred until the 1969 reporting year. These forms used by the provincial hospital insurance plans as well as by the federal government have gone through a series of revision meetings. Staff resources of the Section have been deeply committed to the development of forms as well as detailed definitions and instructions. Staff officers have also co-ordinated the work of the Canadian Hospital Association in their development of a new Canadian Hospital Accounting Manual (CHAM) to ensure compatibility between the Manual and the Annual Return of Hospitals, Part II-Finances, which are very detailed financial statements.

Planning for the revision of the mental institutional returns has also received attention during the year. The development of more management-oriented statistics on a national

basis appears to be now feasible. The development of performance and workload indicators to meet provincial and national requirements is also proposed for this area.

Discussion and planning has been carried out for the implementation of a quarterly series of hospital statistics to meet the continuing requirements of a number of agencies and groups. A wide variety of users are pressing for hospital data which could be met from such a program.

During the year officers of the Division took part in discussions with officials of other departments and with medical groups regarding those health manpower statistics that could be related to the provision of comprehensive health services. Officers also participated in federal-provincial meetings where discussions concerned the potential contributions to statistical knowledge that the processing of common core claim cards, filed under comprehensive medical care plans, would produce, as well as other matters. This statistical knowledge would go beyond the medical component of health manpower to cover practically all the more serious illnesses, to specify their diagnostic distribution, to indicate the medical attention, medically specified and administered treatments these diagnostic conditions called forth, in terms that identify the ill persons, their area of residence, and the medical specialties involved. At the same time, the Division has arranged for a series of supplemental questions about medical care to be placed on the regular Labour Force Survey as supplemental items, in order to provide a measure of the volume of medical contacts, by type, for the whole population. Two of these supplements have already been administered. The results of the series will be published in several occasional reports.

The Division also arranged for one question concerning the volume of dental care in 1967, to be asked on the supplement to the February Labour Force Schedule. This question was requested by the Department of National Health and Welfare, but private groups and associations have also requested information on the distribution of dental care. The results of this survey will also be published.

The Judicial Section is responsible for national statistics on law enforcement, the administration of justice and corrections, including crime, delinquency, traffic enforcement, police administration, adult courts at the trial and appeal levels, juvenile courts, penitentiaries, prisons and reformatories, training schools, parole and such continuing special studies as murder statistics. A total of sixteen reports, statistical supplements, manuals, and papers were published by the Judicial Section during the year. All an-

nual reports for 1966 were published except *Statistics of Criminal and Other Offences* (1965). Earlier release of these annual and preliminary reports led to increased requests for special tabulations by the users.

Work continued on the development of statistical series which permit the integration of information from each of the agencies involved in the administration of justice; the police, the courts and the correctional and after-care services. In one province a system developed jointly by provincial and Bureau personnel has been introduced linking police, courts, and institutions. This system has been designed to meet the administrative requirements of the provincial authorities and to permit studies on the efficiency and effectiveness of the process of justice. In a second province another program has been developed which will provide more complete and accurate statistical data. Plans have been discussed to link the correctional services into this police-court system. Planning sessions have been held with two other provinces on the development of integrated systems for adult and juvenile statistics. These programs were explained at a meeting in Washington, D.C., which was called by the United States Bureau of the Census following the publication of the report of the President's Commission on Crime.

The Division continued work on the development of a continuing recidivist study to cover all persons released from penitentiaries. A second pilot study was conducted covering all inmates released in a nine-month period.

Division officers participated in the federal-provincial conference called to consider changes in the Juvenile Delinquents Act. The Bureau's responsibilities and program revisions were presented to the delegates in a paper presented at the conference. Statistical tables were prepared to assist the delegates in their deliberations.

The Division has completely revised the National Parole statistical program to provide additional statistics on paroles granted or denied.

The Division, under contract with the Solicitor General's Department, is undertaking a study of the educational and training standards of all policemen in Canada prior to the establishment of a national police college. At the request of the Canadian Association of Chiefs of Police a special two-year study on robberies has been developed for the years 1968-1969. A revision of the data submitted by the Canadian Bankers' Association on selected offences against chartered banks has been proposed to expand the usefulness of this study. The number of field visits to police respondents reached a record high of over 200.

In addition, more information concerning the sociological and economic conditions of the areas policed by municipal police forces has been obtained to determine the nature and extent of factors contributing to the quantity, quality and consistency of reported data.

Special tabulations of reported data are compiled periodically and used internally and in the field to assess and discuss rates, percentages and ratios against national averages. Very favourable results have been noted in the quality and consistency of reported data as well as a significant reduction in the number of non-reporting and delinquent respondents.

At the request of the Canadian Association of Chiefs of Police a draft of a Police Records Manual was completed by the Division in consultation with members of some police departments. Adoption of the system is being considered by a special committee of the Association. A great deal of interest is evident in a basic police records system produced earlier, primarily for the use of small police departments where there is a need, and this system has been adopted by a number of police forces.

A new series of historical tables based on the Uniform Crime Reporting program has been developed to show the annual variation in offence and persons charged data by offence classification, including per cent unfounded and cleared, rates per 100,000 population and ratio of persons charged to offences cleared by charge.

Special Surveys Division

Through its eight Regional Offices located in St. John's, Halifax, Montreal, Ottawa, Toronto, Winnipeg, Edmonton, and Vancouver, the Special Surveys Division is responsible for all field survey activities of the Dominion Bureau of Statistics and for providing facilities and services to encourage use of DBS data in each region.

Through these Regional Offices, the Division conducts a monthly Labour Force Survey which involves employment of over 800 part-time interviewers who obtain information by personal interview each month from a probability sample of 36,000 households located in some 400 different locations across the country. Questions on labour force activity are asked each month and the resulting monthly bulletin *The Labour Force* presents detail of employment and unemployment in Canada. During the course of these interviews, information is also obtained relating to other matters of current interest. As an illustration of the variety of information so obtained, questions relating to the following topics were included

with one or more of the monthly surveys - Household Facilities and Equipment; Rents Paid; Child Care Arrangements Used by Working Mothers; Overtime and Premium Pay; Occupational Mobility; Medical Consultations; Dental Care; and Smoking Habits.

Another important activity of the Regional Offices is the collection of monthly data on retail prices of commodities and services used in the compilation of the Consumer Price Index. This index is largely based upon prices for some 300 commodities which are collected by the Regional Office staff in representative retail outlets in 30 of the larger cities of the country. During the year, the pricing program was expanded by extending coverage to a larger number and a more representative group of retail outlets and to a number of new cities. A special survey involving the collection of detailed information on family expenditures from 2,000 households was also conducted as part of a continuing program to refine the weights associated with component items of the Consumer Price Index.

During the early part of the year, a new quarterly Job Vacancy Survey was started which will be progressively expanded over a two-year period to provide current estimates of job vacancies in all sectors of the economy. A new unit was established in each Regional Office for this purpose and new staff was acquired throughout the year as survey activities expanded. One of the first tasks was to conduct "profile interviews" with senior officials in the larger manufacturing firms. The purpose of these interviews was to determine those officers who were closely associated with staffing functions and to clearly define those particular occupational groups or units within the firm for which each could individually report. In this manner, "reporting units" were defined within each firm. The survey methodology involves mailing questionnaires at periodic intervals to all such reporting units and interviewing a sample of the reporting units to determine reporting errors. The results of these interviews permit the application of correction factors to improve the accuracy of the resulting job vacancy estimates. Profile interviews for the larger manufacturing firms have now been essentially completed and similar interviews for other industrial sectors have been started and will continue into the new year.

Regional Offices also collect business reports for almost all subject-matter divisions of the Bureau. Each office maintains a reference library of all DBS publications for the convenience of those wishing to obtain assistance or to refer to DBS data. A new development during the year saw the appointment of a Statistics Use Development Officer in the Montreal office. A similar position

has been established in the Toronto office but has not yet been filled. The objective in establishing such positions is to develop, within the business community, a more complete awareness of the extent and nature of DBS data available and how it can be used to advantage.

Provincial Liaison and Consultative Services

The Co-ordinator of Provincial Liaison and Consultative Services visited most provincial capitals for informal discussions with provincial government statistical officers and economists concerning present and potential DBS programs, regional statistical requirements and related matters. Consultation was provided to numerous organizations monthly in the assembly of statistical infor-

mation for specific regions. The staff, in co-operation with the Department of Indian Affairs and Northern Development, undertook a Manpower Test Survey of the Northwest Territories, from determination of concepts to analysis of data.

The staff also provided organizational and secretarial service to a number of federal-provincial conferences and meetings held in the fiscal year among which were the following, not mentioned elsewhere in this report: - in May 1967, the Sixth Federal-Provincial Conference on Economic Statistics; June 1967, the Federal-Provincial Subcommittee on Statistics Legislation; March 1968, the Federal-Provincial Subcommittee on Census and the Federal-Provincial Subcommittee on Statistics Legislation and Residual Disclosure.

OPERATIONS AND SYSTEMS DEVELOPMENT BRANCH

The Operations and Systems Development Branch consists of a small central staff concerned with branch administration and planning, the Tabulating Services Division which provides a range of mechanical and electronic data processing services, the Central Programming Division which provides to most DBS staffs the professional skills and advice required to use computer methods, the Management Services Section which advises on the organization and use of office staffs, and the Central Registers Section which provides industrial and geographical classification codes for all establishments covered by regular DBS surveys, and assists in eliminating duplication among and ensuring full coverage of these surveys.

The Operations and Systems Development Branch has no program of its own; it exists solely to service the needs of the statistical and administrative branches of DBS. There have been no changes in the functions of the Branch over the past year. The organization of the Branch has been modified to improve its ability to provide service; in particular, four sections have been established in the Central Programming Division, each charged with providing necessary services to one or more branches of DBS, and there has been a preliminary regrouping of functions within the Tabulating Services Division. Further modifications will be made over the next year or so, but these are not anticipated in the present Program Review.

In addition to the divisional work described below, senior officers of the Central Programming and Tabulating Services Divisions

continued their participation in equipment studies. Specifications for a new general-purpose computer to replace the aging machine acquired in 1960 were completed, approved by the Treasury Board, and sent to tender. Studies of optical scanning equipment continued, and the technology of two such devices was tested during the year. Alternative computer service bureau facilities available in Ottawa were also given comparative tests to determine their suitability for particular DBS applications.

The resources of the Branch were supplemented during the year by two contracts with System Development Corporation of Santa Monica, California. The first contract was for a study of data processing operations in DBS, and provided a series of recommendations which have assisted in planning the transition to modern computing equipment. The second was for assistance in developing an evaluation plan for the selection of the most suitable available computer for general statistical applications. We expect to continue our use of consultants to assist in improving various aspects of our data processing operations.

Tabulating Services Division

The Tabulating Services Division provides facilities to process the data gathered by subject-matter divisions of DBS, and reduce it to more manageable form for further analysis or publication. When a minimum of cross-classification is required, aggregates and averages may be obtained by peg-bar methods

of compilation, using comptometers and desk calculators. For projects which involve more complex cross-classifications or necessitate more difficult and rapid manipulations of the data the Division uses:

- (1) a large key punch section with over 100 key punch-key verify machines;
- (2) a wide variety of unit record (punched card) equipment including sorters, collators, reproducers, interpreters and card proving machines;
- (3) a large computer installation consisting of 1 medium and 2 small-scale electronic computer systems. Towards the end of the year one of the small-scale systems was upgraded to medium size, and Treasury Board approved the acquisition of additional memory for the other.

During the year some 32 million punch cards were used in total, of which about 21 million were key punched by some 125 key punch and key verify machine operators. The evening shift which was introduced in 1967 has proven highly successful in providing additional capacity without an increase in space and machine requirements.

Editing of the data by mechanical means and seeking out inconsistencies which may arise through misinterpretation of instructions governing the collection of data, and errors in recording answers, are important functions of the unit record sections and computer centre. Tabulations produced after completion of the editing process are increasingly used directly as photo-copy for printing publications. Tabulation work has now been fully transferred to computers, but sorters, collators, and other card handling machines remain useful in preparing data for simple computer processing.

The DBS computer installation now consists of an IBM 705 computer system and an IBM 360/30 computer system (both medium scale by present standards), an IBM 1401 small-scale system, and peripheral equipment. The computer centre normally operates on a 3-shift, 24-hour day, 5-day week basis. Early in the year some weekend work was included to maintain schedules and meet target dates. Commencing in October, this was extended to a full 24-hour day, 7-day week basis. This has yielded some 7,300 hours on the 705 system and 15,000 hours on the 1401/360 systems producing in excess of 3 million sheets of original tabulation.

Most of the time and effort of the Division is allocated to the work of the Bureau. A few requirements of other government departments and agencies are still accommodated on a cost-reimbursement basis. In February 1968, a terminal was installed in the computer centre providing a link with a UNIVAC 1108 system in a commercial installation located in down-

town Ottawa. This system, and those installed at the Central Data Processing Service Bureau, are being used to an increasing extent to supplement equipment installed at DBS and to obtain special features not available on in-house equipment.

During the year the organization of the Division was modified to improve co-ordination and service capacity. These modifications are regarded as a first step towards building the improved organization which will be necessary to make effective use of a large-scale "third generation" computer operating on several programs at the same time.

Central Programming Division

The Division was reorganized early in the fiscal year to provide better service to the newly created Branches within the Bureau. Four positions were allocated to provide a Programming Service Section Chief for each of the two larger Branches, and for two other groups of Branches. Each section chief was made responsible for a number of teams each consisting of a senior systems analyst and three or more junior analysts and programmers. Each team attends to the requirements of one or more subject-matter divisions. This reorganization, the creation of more units, and the need to provide training for a large number of new recruits placed a severe strain on the experienced analysts and programmers on the staff.

As in past years, recruitment of experienced programmers did not meet requirements, but recruiting of university graduates as programmer trainees was successful. One internal (DBS) competition was held. As a result of an intensive recruiting program by the Public Service Commission Staffing Branch, the Division had no vacancies at the end of the fiscal year. There were 39 additions and 13 separations during the year.

A total of 1,195 days of formal training was given to staff members. This includes 813 days of computer courses and 382 days of language and other training, but does not include on-the-job training.

Requests for programming services continued to increase. Three major factors contributed to this increase: (a) accelerated requests to process more DBS surveys by computer; (b) the 1967 Test Census overlapping the processing of the 1966 Quinquennial Census; (c) the necessity for reprogramming surveys and special requests due to overload on the main DBS computer system. Not included in the above, but contributing to the load on senior and experienced staff, were the planning, specification writing, development of evaluation techniques, and benchmark programming, required for the

acquisition of a new large-scale computer and optical scanning equipment.

Manpower was provided for a nation-wide survey conducted by the Pay Research Bureau and for Personnel Selection Boards and Manpower Inventory Boards conducted by the Public Service Commission. Staff members attended seminars, meetings and demonstrations in New York; Rochester and Minneapolis, Minnesota; Washington; Quebec City; Houston, Texas; Los Angeles, California; and Endicott, New Jersey.

A total of 848 programs were written during the year for use on the three DBS computer systems, and on the Central Data Processing Service Bureau, university and commercial service centre installations.

Management Services Section

This Section provides a departmental consultative service to assist officers of the Bureau in improving the efficiency of their operating staffs. As originally planned, the Section was to direct its efforts primarily toward the improvement of methods and procedures. However, in many areas the effect of conversion to electronic data processing has caused a substantial change, both in the content of numerous jobs and in the organizational structure required to carry out the new procedures. Consequently, the Section has frequently become involved in planning extensive reorganizations of operating staffs.

Projects completed during the year include preliminary studies of work processes affecting the timeliness of DBS publications and development of a system of recording and reporting timeliness data; feasibility study of possible automation of the semi-annual crops and livestock survey, and other smaller surveys in the Agriculture Division; reorganization plan for the Agriculture Division to achieve better utilization of presently authorized staff; revision of processing routines for personnel documentation to achieve a more efficient use of staff and to provide more reliable input for the departmental system of mechanized personnel records; method and productivity study of document processing in the Central Personnel Records System Division to develop production standards and to forecast staff requirements; method and productivity study of clerical data processing in the Vital Statistics Section and planning of revised procedures made necessary by increased automation of vital statistics records; developing terms of reference for and planning the organizational structure of a DBS Records Management Unit.

One member of the staff was loaned to the Royal Commission on the Status of Women for

two months early in the year, to develop critical path charts covering three different aspects of the overall activities of the Commission. A computer program was also adapted to provide critical dates for significant events. Another member of the staff was loaned to the Personnel Policy Branch of Treasury Board for most of the year to work with an outside management consultant on the development of an interdepartmental personnel information system for use by most departments and agencies in the Public Service. The report on this study was submitted to and accepted by Treasury Board in February 1968.

A substantial number of projects were in process at the end of the fiscal year. These included the planning of a cost recording system which would provide more accurate estimates of the cost of individual statistical projects.

Central Registers Section

The Central Registers Section administers and develops the DBS Central List of Companies and their Establishments, which provides the basic vehicle for standardizing the classification of companies and their sub-division into standard reporting units for individual DBS surveys. During the year the Central List numbering system was applied to all surveys in the Merchandising and Services and the Business Finance Divisions, which had not previously been entered in this record. The Department of Defence Production adopted the Central List numbering system to identify suppliers with whom they do business, and business continued to examine this record as a possibility for establishing a standard "vendor code" system.

Investigation and resolution of inconsistencies in the Central List continued. During the year 475 such problem cases were cleared, including a backlog of some 250 cases requiring attention at the beginning of the year. This work area is now up-to-date. In addition, regular maintenance of the Central List record required 24,000 additions, 9,000 deletions and over 55,000 revisions of existing records due to changes in name, location, activity or establishment breakdown.

At the close of the year, action was initiated to expand the computer tape record to show full company name, location address, industrial classification and unique identification as well as inter-company relationships and identification of each DBS survey covering a respondent or reporting unit. Application of the Standard Geographical Classification to the record was under way. A procedure was also established to allow integration with the

monthly Employment and Payrolls survey for automatic exchange of common data between the two computerized systems.

A paper was prepared outlining the possible use of the Central List as a nucleus for the development of a "Common Employer Numbering System" comprising all businesses in Canada to accommodate the needs of all user government departments. The proposed plan was found generally acceptable by DBS, the Unemployment Insurance Commission, and the Taxation Division of the Department of National Revenue, and a small working committee will elaborate, at the year end, the proposal in terms of the specific needs of user departments to ensure that such a central index would be acceptable in practice.

The co-operative arrangement with the Unemployment Insurance Commission was continued, whereby their local offices collect a Nature of Business Report from all new registrants. This has proven to be the major source of information necessary to keep DBS survey lists up-to-date. It results in the semi-annual publication *New Manufacturing Establishments in Canada*. At year-end, arrangements were completed to forward basic information from the Nature of Business Reports to the Department of Manpower and Immigration in order to keep their lists of employers up-to-date. During the year special tabulations of new businesses in the Atlantic Provinces were prepared for the use of the Atlantic Development Board in an economic study of that area.

ADMINISTRATIVE SERVICES

Under this general heading are found a series of functions serving the Dominion Bureau of Statistics as a whole, including administration, staff organization, staff development, financial control, training and classification, publications distribution and office services such as the addressograph unit, stenographic pools, supplies, mail and messenger services.

Staff Organization

During the year, staffing activities resulted in a 15 per cent increase in staff at the Bureau; 498 new employees were recruited, including 81 statisticians, 6 economists and 26 computer systems analysts. This represented a net increase of 368 employees bringing the total complement of continuing full-time employees to 2,813, as at March 1, 1968. Additionally, 84 persons had been offered employment with the Bureau as a result of open competitions conducted by the Public Service Commission or by the Bureau on work-sharing arrangements.

A total of 739 employees were promoted during the year as a result of the Bureau's appraisal program and of the 250 departmental promotion competitions. Only sixteen appeals were filed against the results of these promotional actions and of these seven were upheld by the Public Service Commission Appeal Boards.

The Health Unit, a branch of the Public Service Health Division of the Department of National Health and Welfare, continued to provide an industrial nursing service for employees.

Staff Relations and Evaluation

Preparations for collective bargaining proceeded with direct involvement of DBS staff in the preparation of bargaining books for the social science support and economics, sociology and statistics occupation groups, identification of management and confidential exclusions, introduction of grievance procedures and a discipline policy, and training of managerial and supervisory employees in staff relations.

In the field of employee evaluation, the appraisal system introduced for professional staff was extended to cover the technical officers of the Bureau. A new system of employee appraisal has been developed to cover the technical, administrative support, and operational categories. In addition, plans have been developed to introduce a performance review system and, where possible, to integrate appraisal actions with staffing actions, especially with a view to reducing the number of special competitions.

Staff Development and Training

An active basic program has been carried out by this Section covering the three main fields of supervisory and management development, computer training and a variety of skills training. The staff of the Section operated as consultants to line managers in initiating a general survey of training needs and developing the framework of a program to satisfy the needs that were identified.

In the area of supervisory and management training, 68 selected employees were given theoretical and practical training in effective supervisory and management principles and techniques. The training staff co-ordinated and administered the selection and assignment of 34 candidates for specialized courses given by the Public Service Commission, 4 for post-graduate, and 53 for university extension and courses offered by other educational institutions.

The computer training programs were co-ordinated with a view to training management in understanding the benefits and limitations of the computers in their respective fields. Such training as the orientation course in mechanized data processing was administered by the Bureau for 83 of its personnel. Five hundred personnel participated in other computer courses primarily offered to meet the technical requirements of the Bureau.

This Section has also made progress in developing effective courses in the fields of induction and orientation. One hundred and twenty-five personnel are currently at various levels of training in a second language training program. Special training was organized for 20 Foreign Aid students referred to DBS by the External Aid Office. Job analysis and evaluation courses have been conducted in order to increase the proficiency of 104 line officers in job description and position classification. Plans have been finalized for courses in statistics, mathematics and accounting. An employee's handbook is expected to be made available in the coming year.

Staff Classification

An extremely heavy classification program was undertaken during the year under review but a substantial backlog still existed at year-end. Some 612 cases were documented and classified by the classification staff within the limits of the classification authority delegated to the Bureau. In addition, 204 other cases were documented and submitted to the Bureau of Classification Revision during the same period. At the time of the report, there were 102 outstanding cases awaiting action.

Conversion of all positions classified as technical officers was carried out in March 1968. The standard for the socio-economic group is being developed and it is anticipated that conversion will be completed by the end of June 1968. At the present time, preparations are being made for this conversion and conducting an analysis of existing job descriptions on file as well as working with the professional staff in the preparation of suitable and acceptable job descriptions.

Four job description and point rating courses were conducted during the fiscal year and 71 people attended. The Classification Staff along with BCR provided the majority of lecturers and syndicate leaders. The Bureau of Classification Revision will be unable to continue its participation in future courses and a heavier workload will necessarily be imposed on the Classification Staff. These courses are proving very beneficial and a decided improvement in job descriptions is noticeable. Job training was also provided for four apprentice Classification Officers from BCR.

The allocation of administrative officers to branches and divisions of DBS has greatly improved the administrative procedures. It is intended to delegate classification to branches for the administrative support group and to maintain an audit responsibility in the Classification Section. Procedures to introduce this program into operations are being developed and, as an initial step, graduates of the DBS courses are being given rating experience as members of rating committees.

Incentive Awards

During the year, thirty-nine suggestions were received from DBS employees, of which nine were carried forward from the previous year. Twenty-eight of these suggestions were referred for investigation and three were approved for awards. Early in 1968, the DBS Incentive Awards Plan was turned over to Organization and Personnel Services for administrative purposes.

Financial Services

This Section has two main functions which are performed by the Accounts Unit and the Publications Distribution Unit.

The Accounts Unit is concerned with the overall financial operation of the Bureau including the co-ordination of the Program Review and Estimates. The Unit examines and controls expenditures, audits travel claims and commercial accounts, interprets financial regulations and maintains a financial management reporting system. During 1967-68, further improvements were made in the financial management reporting system, and the first steps were taken towards the establishment of a project costing system.

The Publications Distribution Unit is concerned with the sale and distribution of DBS publications and maintains current mailing lists for distribution of publications and subscription statistical reports. During the fiscal year 1,506,513 pieces of mail were dispatched and 25,009 mail orders were received.

The subscription mailing list is currently made up of 191,150 addressograph mailing plates.

Office Services

As of March 31, 1968, Typing and Transcribing Services included a total of six Typing Units, three located in the main DBS building, one in Number 5 Temporary Building to service those divisions of the Socio-Economic Statistics Branch located there, one in Number 8 Building to service the Census Division, and one in the Kent-Albert Building to service the Aviation Statistics Centre. During most of the fiscal year under review all units were operating under a line-count system whereby production is expressed in terms of lines typed (a standard line is defined as 60 strokes). The number of lines (or equivalent) produced in all units during the current fiscal year totalled 8,455,266. Nineteen positions, previously under the control of Typing and Transcribing Services but with incumbents located outside the units, were transferred under divisional control effective April 1, 1967.

During 1967, an extensive study of the method of recording production was undertaken by the Management Services Section which recommended that the line-count system be discontinued. A mechanical system, using the Optical Mark Page Reader, was recommended and introduced in all units by April 1, 1968. This system will produce: (a) acceptable standard unit times for each different category and type of work, (b) operator production data to assess the relative efficiency of each operator and (c) monthly and annual reports of time chargeable to each publication and to other work, by branch, division and section. It is estimated that the new production recording system will effect savings of approximately \$7,000 annually.

The Printing Liaison Services Unit, in addition to maintaining liaison with the Vari-type and Printing Sections of the Canadian Government Printing Bureau situated at DBS, is responsible for examining manuscript of DBS publications being submitted for composition and advising on layout, format, standards, stock and binding of publications. During the 1967-68 fiscal year, this unit processed 14,200 pages of copy for printing.

The Drafting Unit planned, organized and reviewed a total of 2,468 economic charts,

maps and various illustrations in black and white and colour to illustrate statistical data for the use of management and publishing in over 800 DBS publications, and for other departments and agencies of the Government.

In the Forms Design Unit, work continued on the simplification of design, standardization and revision of forms and questionnaires. During the year, the Unit processed 3,633 forms comprising 11,260 pages of new forms, revisions or reprints. In addition, 534 specialty forms and envelopes were processed and 2,442 miscellaneous printing jobs submitted.

In the Addressograph, Mail and Supplies Unit 17,480,786 forms were addressed for the various divisions of the Bureau. In addition, 286,732 plates were embossed, 104,937 corrected and 258,609 deleted. In addition 51,500 pieces of mail were enveloped by hand and 3,545,981 were inserted by machine. The new heat transfer machine was placed in operation November 15, 1967 and at the end of the fiscal year had addressed 1,117,977 forms.

During the year 24,906 bags of mail were deposited with the Post Office and 11,745 were received. In addition to mail for delivery in Canada, 25,736 pieces of registered mail, 22,675 air mail, 1,295 special delivery, 6,849 parcel post and 102,438 foreign mail were dispatched. Also included in mail dispatched were 1,420 bags containing 3,811,462 pieces for the Department of Agriculture. At March 1, 1968, a new sub-mail unit was established at Number 5 Temporary Building to service the requirements of the Socio-Economic Statistics Branch.

The Supplies Unit submitted 1,190 requisitions to the Department of Defence Production for printing, stationery, office machines and equipment for an estimated value of \$808,500; emergency purchases on outside agencies amounted to \$25,314. The supplies inventory as at March 31, 1968 was \$40,462; the annual stock turnover rate, therefore, was 20.1. A shredding machine has been added to our machine inventory and subject-matter divisions are now able to destroy "Confidential Matter" no longer required. During the period under review, work was completed on 38,531 jobs for a total of 1,244,853 Xerox and Banda photocopies, and 17,055 copies made in March 1968 on the new high speed Dennison copy machine installed at Number 5 Temporary Building to service the Socio-Economic Statistics Branch.

DOMINION BUREAU OF STATISTICS SENIOR OFFICERS

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